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SECURITY MANAGER'S JOURNAL

A possible data theft demonstrates the need for better activity logs. PAGE 30

PRIVACY VS. SECURITY

The U.S. will start issuing RFID-enabled passports this week amid security experts' warnings. PAGE 10

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IN DEPTH: SOA MANAGEMENT

Proving SOA Worth Is A Big Challenge for IT

Tools emerging to manage, measure benefits of the complex architecture

BY HEATHER HAVENSTEIN

The allure of easing integration costs and infusing flexibility into rigid monolithic applications is persuading IT shops to flock to Web services and service-oriented architectures.

But soon after committing to use the new integration architectures, many IT managers find themselves searching for ways to justify the cost to top corporate management.

"It is very difficult to convey this message to senior executives who don't have a clue what SOA is nor what it brings to the party," said David Berry, senior vice

Continued on page 6

- IT managers are searching for tools that can measure the performance of an SOA. PAGE 6
- Integrated Web services are forcing users to adjust their testing procedures. PAGE 7

SKYPE Slips INTO BUSINESS

Consumer-oriented VoIP services are **sneaking into the office**. The question for IT is whether to **embrace** the trend **or stop** it, reports Robert L. Mitchell.

DEVON BOWMAN

Penalize Purveyors of Spyware, Experts Say

Corporate PCs hit at an alarming rate

BY ERIC LAI
LAS VEGAS

With the spyware plague showing no signs of abating, some experts and IT users are calling for stiffer penalties, including jail time, for convicted spyware purveyors.

At the Black Hat security conference here last week, speakers said that antispyware vendors are losing the arms race against creators of spyware and that drastic measures are needed.

"It's what keeps me in busi-

Spyware, page 45

E-voting Security Under Fire in San Diego Lawsuit

Machine practices, reliability in doubt

BY MARC L. SONGINI

A lawsuit has arisen over alleged breaches in security procedures around electronic voting machines in San Diego County following a hotly contested congressional election, casting doubt on the reliability of the machines themselves.

The suit, filed on July 31, requests that a special election on June 6 to fill the 50th Congressional District seat be invalidated. It also seeks a complete manual recount of the paper ballots, said Paul Lehto, an Everett, Wash.-based attorney handling the case. The suit was filed in Superior Court in San Diego and names Mikel Haas, county registrar of voters, and Brian Bilbray, the winner of the seat, as defendants. San Diego voters used AccuVote optical-scan and TSx touch-screen systems from Diebold Election Systems.

Whatever the specific merits of the suit, it could heighten some

E-voting, page 14

INSIDE

A federal lawsuit has been filed against an undisclosed e-voting vendor. Page 14

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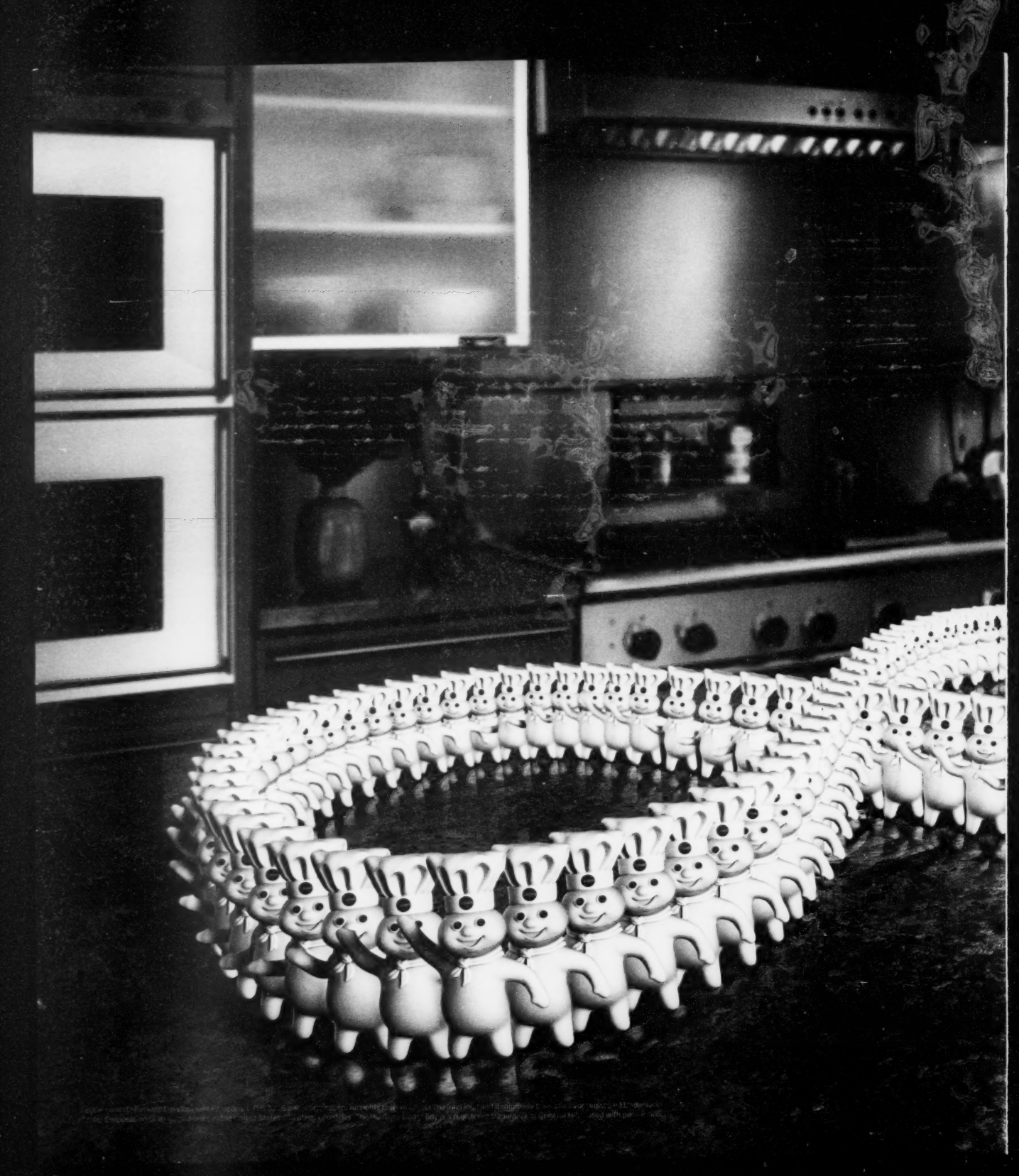

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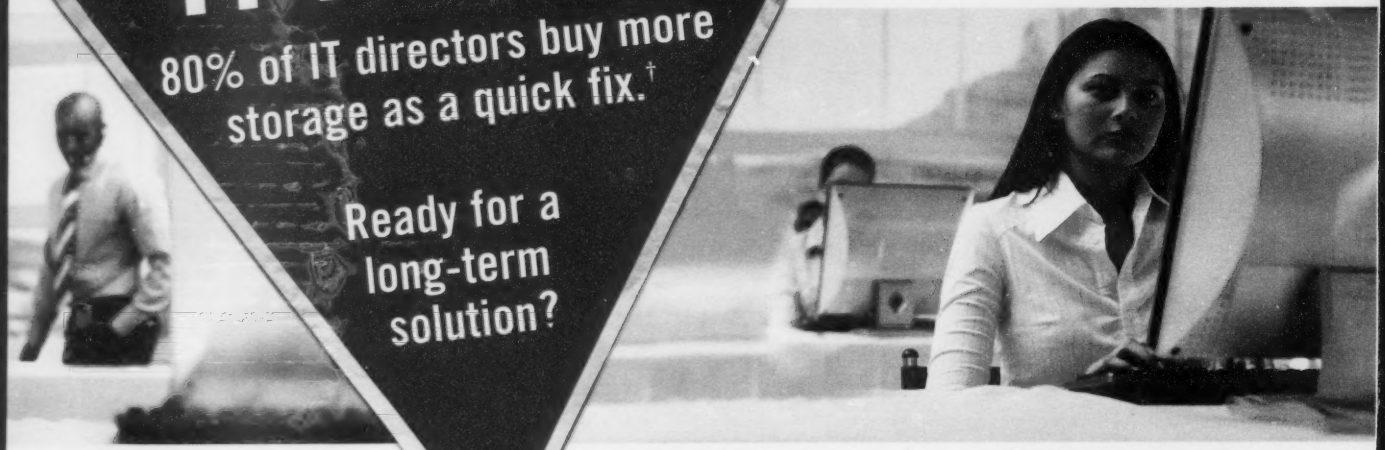

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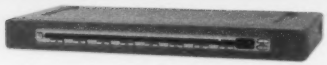

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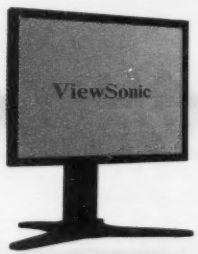

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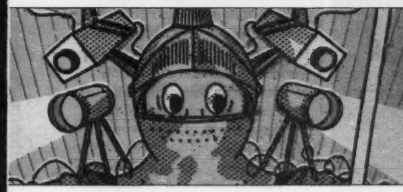

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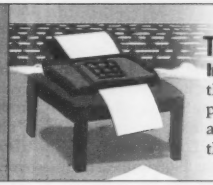
In the Technology section: Protecting the private information of customers has become a high-stakes affair for most companies. Pros from the health care and financial services industries offer advice on how to do it. **Page 23**



The Elusive Summer Getaway
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IN DEPTH: SOA MANAGEMENT

Continued from page 1

president and CIO at Coty Inc., a cosmetics company in New York. "The only thing they do recognize is the end result."

IT managers say that efforts to manage SOAs are far more difficult than similar projects for client/server and Internet technologies. Some companies are creating or buying tools to help calculate the performance and measure the benefits of an SOA. Then they can use the data to persuade sometimes skittish executives to continue investing in the technology.

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The AmberPoint tool includes software agents that sit on application servers to inspect message traffic and report key information about the services it discovers — such as who owns the service, its function and how critical it is to the business overall — to a data warehouse.

The company expects that the implementation of AmberPoint's SOA Management System tool, coupled with Tibco Software Inc.'s Staffware Process Suite process management software, will replace previous efforts to manage the firm's SOA using service registries.

The registries were not an effective way to get visibility into the SOA, because only 20% of the services were being registered by the company's 1,500 developers, he said. At the same time, even fewer consumers were logging information about how they would be using the services.

With the AmberPoint system, once a service is discovered and all its associ-

Implementation Challenges

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BASE: A SURVEY OF 284 COMPANIES WORLDWIDE, NOVEMBER 2005

SOURCE: ABERDEEN GROUP INC., BOSTON

Measuring SOA Performance Is A Complex Art

Companies look to separate IT systems management from SOA management

AS COMPANIES become increasingly reliant on service-oriented architectures to support mission-critical transactions, monitoring the performance of Web services – which can be more complex than traditional system monitoring – is quickly becoming an IT priority.

The nature of an SOA – multiple loosely coupled services interacting to link applications or perform a business process – is prompting some companies to create a strategy that separates management of SOA systems from IT systems management to ensure that services are continuously available.

Andres Carvallo, CIO at Austin Energy in Texas, said a key challenge for IT is to measure the uptime and performance of this new type of application.

"Most solutions out there give you an uptime of the infrastructure, databases and standard applications, [but] Web services and composite applications are a new frontier," he said.

Austin Energy is building an SOA to integrate applications that span the utility's five divisions; its first SOA application went live in May.

For the past six months, the company has been testing an SOA performance monitoring tool called AppVision from nVision Software Technologies Inc. in Austin. Without it or a similar tool, IT "cannot know if a Web service is down or not performing well," Carvallo said.

A survey of 400 IT managers and developers published last month by Evans Data found that Web services are often unavailable for periods ranging from an hour to a day.

Almost half of the respondents said that when their most reliable Web services go down, they usually stay down for an hour or more. Almost half of the worst-performing Web services used by the respondents are typically down for more than six hours, the survey found.

Cosmetics company Coty late last month began holding meetings to discuss how to include transaction monitoring in the SOA it has implemented to integrate its global systems.

The company plans to internally develop monitoring tools for ensuring that transactions are completed and that the company's customer service group gets more accurate shipping schedules to pass on to clients, said David Berry, senior vice president and CIO at Coty.

At Coty, the SOA is "the heartbeat" of the business, he said. "It is processing transactions for virtually every part of the company. There are significant dollars and cents on the table" if there are performance issues, Berry said.

Eventually, he added, the company wants the tool to be able to trigger a Web service that can update the status of an order when a significant event occurs, such as when a bar-code label is produced to prepare a product for shipping from a warehouse. Coty will use middleware from iWay Software combined with its IBM MQSeries messaging tools to monitor performance.

Most solutions out there give you an uptime of the infrastructure, databases and standard applications, [but] Web services and composite applications are a new frontier.

ANDRES CARVALLO, CIO, AUSTIN ENERGY

Linda Scotto, manager of applications development and support at the National Rural Electric Cooperative Association, said that her organization was crashing its IBM zSeries mainframe regularly late last year when it first began testing the use of Web services for straight-through processing of transactions from the Web portal to the mainframe.

To fix that, the company added settings in its mainframe integration tool and Microsoft BizTalk Server to adjust the time between the processes being sent to the mainframe. In addition, BizTalk now holds transactions submitted by customers while the mainframe is doing its nightly batch processing, Scotto said.

– HEATHER HAVENSTEIN

ated metadata is added to the warehouse, a workflow is automatically kicked off to retrieve approval for the service and to request that managers build a service-level agreement governing its use.

"When I go to IT management, they don't care how many services are out there," the executive said. "But if we know the value of a service — which we get people to model once it is discovered — and we know how many reuse [instances] there are, we can start backing into the value of reuse."

Long-Term Challenge

Finding ways to show the value of an SOA remains perplexing for many corporate IT organizations, according to industry analysts.

A recent research report from Boston-based Aberdeen Group Inc., for example, noted that 41% of respondents surveyed at 284 companies have found that the biggest obstacles to SOA adoption is "limited visibility of SOA value."

Likewise, a recent survey of 400 IT managers by Evans Data Corp. found that justifying an SOA investment is one of the top four inhibitors to SOA adoption.

"Implementing a new technology architecture takes time and money, and [any new technology] has always been hard to justify and to ascertain an ROI," said John Andrews, president of Santa Cruz, Calif.-based Evans Data. The value of an SOA will most likely be realized over the long term rather than the short term, he added.

In the meantime, Andrews suggested placating senior management by building an SOA incrementally and choosing projects "where there is rapid need for change, and the reuse of a service can accelerate the ability for IT to react."

Linda Scotto, manager of applications development and support at the National Rural Electric Cooperative Association (NRECA) in Arlington, Va., said she has been able to justify her organization's investment in SOA by showing that it has helped boost customer satisfaction while extending the life of the organization's mainframe system.

Value of SOA

From 2006 to 2010, SOAs could help Global 2,000 corporations **save up to $53 billion** in IT costs by cutting software purchases.

SOA can help **save up to 25% on application development costs** when used over the entire development life cycle.

SOURCE: ABERDEEN GROUP INC., BOSTON

Prior to building an SOA, the association, which provides employee benefit plans to more than 900 cooperative electric utilities nationwide, had manually entered data into an IBM zSeries mainframe from changes customers had entered through its Microsoft SharePoint Portal.

"Our customers saw through the smoke and mirrors when there were typos [in company correspondence]," Scotto said. "We were getting bad egg on our faces."

So last November, the NRECA began installing DataDirect Technologies Inc.'s Shadow z/Services integration tool to let clients directly deliver information to the mainframe system via the portal and Microsoft's BizTalk server.

Since then, the NRECA has been processing changes to plans that are made by individual clients.

Last month, the association moved to expand use of DataDirect's tool by gathering requirements for processing group plan changes made by clients, Scotto said.

Some users are justifying SOA investments to management simply by solving problems.

Alan Anderson, director of application development at VP Buildings Inc., said his IT shop has never had to use management tools to justify the use of Web services to upper-level management. The executives "don't care how we solve a problem, as long as we solve it," he said.

The Memphis-based manufacturer of steel building materials this month will extend its SOA to the second of its five manufacturing sites to provide purchasers in its procurement department with real-time access to the status of inventory consumed on the shop floor.

VP Buildings is using SOA middleware from iWay to link its PeopleSoft inventory software — which is operated by an off-site firm — and home-grown Microsoft .Net-based manufacturing software.

Before launching a Web services link between the systems, inventory consumption had to be updated manually from the shop floor, a process that could take several days, Anderson said. Now, by pairing the integrated systems with bar-code labeling, inventory information can be updated in real time.

The selling point for using Web services for the integration, Anderson added, was the cost-effectiveness and simplicity of linking the applications compared with traditional hard-coded integration.

He noted that building a customized link between the systems would have cost about $175,000 and taken 18 weeks, whereas installing the iWay software took two weeks and cost $110,000. ▸

IT and Business Benefits

SOA BENEFITS FOR IT
- Better able to manage IT complexity
- Ability to reuse applications
- Faster IT implementations
- Lower IT integration costs

BENEFITS FOR BUSINESS
- Faster reaction to change
- Increased competitiveness

SHARED BENEFITS FOR BOTH IT AND BUSINESS
- Improved alignment of IT and business
- Lower overall cost of IT
- Lower IT maintenance costs
- Life-cycle visibility into business process management
- Development of new IT-enabled capabilities

SOURCE: ABERDEEN GROUP INC., BOSTON

SOA Requires New Testing Tools, Processes

BEFORE THE RECENT MOVE to service-oriented architectures, application testing mostly called for ensuring that a software application performed as it was designed, could handle specific loads and could be integrated with other isolated applications.

Throwing Web services into the mix is creating complexities that are prompting users to adjust traditional testing procedures.

Common monolithic applications were not written to be broken down into components, and they can be more easily tested than service-oriented applications, which can be dynamically tied together with components from other applications.

In addition, while an SOA can create flexibility by tying together multiple services to form new business processes, it also can create new points of failure at the various connection points – all of which need to be tested.

Patrick Plant, director of information services for the Anoka-Hennepin School District in Minnesota, said that the move to an SOA requires a shift in all parts of the development process – especially testing.

"In many cases now, you have more parts interacting with other parts," said Plant of SOA applications. Therefore, "you're also having to test the application interacting with other applications and other interfaces."

To help guide its SOA testing efforts, the school district has created matrixes noting all the possible combinations of browsers and operating systems that could be used to access its applications, Plant said.

The school district, based in Coon Rapids, Minn., is working with Hewlett-Packard Co. to help it build an SOA. The system will eventually link its 40-plus systems to provide centralized access to bus routes, student schedules and assignments, attendance records and lunch accounts.

Donald Marcotte, principal test engineer at Cardinal Health Inc., a Dublin, Ohio-based distributor of pharmaceuticals and medical supplies, has been using the Lisa SOA testing tool from Dallas-based Itko Inc. on an SOA project for the past month. The tool simulates users accessing the Web services, in order to gauge response times, Marcotte said.

> **"In many cases now, you have more parts interacting with other parts. You're also having to test the application interacting with other applications and other interfaces."**
>
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The SOA project at Cardinal Health involves using Web services to access internal company applications and a centralized database. He declined to provide more details because the application could provide the company with a competitive advantage.

Marcotte said he chose Lisa because it will let him use a single tool to test services running from the presentation layer to the database. "We have multiple layers to test, [and] it could be very expensive to buy a tool for each layer," he said.

In addition, Marcotte said, he needed a flexible tool that could easily change the tests it runs when the code in the SOA application changed.

– HEATHER HAVENSTEIN

IN DEPTH: SOA MANAGEMENT

Continued from page 1

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For the past six months, the company has been testing an SOA performance monitoring tool called AppVision from nVision Software Technologies Inc. in Austin. Without it or a similar tool, IT "cannot know if a Web service is down or not performing well," Carvallo said.

A survey of 400 IT managers and developers published last month by Evans Data found that Web services are often unavailable for periods ranging from an hour to a day.

Almost half of the respondents said that when their most reliable Web services go down, they usually stay down for an hour or more. Almost half of the worst-performing Web services used by the respondents are typically down for more than six hours, the survey found.

Cosmetics company Coty late last month began holding meetings to discuss how to include transaction monitoring in the SOA it has implemented to integrate its global systems.

The company plans to internally develop monitoring tools for ensuring that transactions are completed and that the company's customer service group gets more accurate shipping schedules to pass on to clients, said David Berry, senior vice president and CIO at Coty.

At Coty, the SOA is "the heartbeat" of the business, he said. "It is processing transactions for virtually every part of the company. There are significant dollars and cents on the table" if there are performance issues, Berry said.

Eventually, he added, the company wants the tool to be able to trigger a Web service that can update the status of an order when a significant event occurs, such as when a bar-code label is produced to prepare a product for shipping from a warehouse. Coty will use middleware from iWay Software combined with its IBM MQSeries messaging tools to monitor performance.

WILLIAM DEBREE

Most solutions out there give you an uptime of the infrastructure, databases and standard applications, [but] Web services and composite applications are a new frontier.

ANDRES CARVALLO, CIO, AUSTIN ENERGY

Linda Scotto, manager of applications development and support at the National Rural Electric Cooperative Association, said that her organization was crashing its IBM zSeries mainframe regularly late last year when it first began testing the use of Web services for straight-through processing of transactions from the Web portal to the mainframe.

To fix that, the company added settings in its mainframe integration tool and Microsoft BizTalk Server to adjust the time between the processes being sent to the mainframe. In addition, BizTalk now holds transactions submitted by customers while the mainframe is doing its nightly batch processing, Scotto said.

– HEATHER HAVENSTEIN

ated metadata is added to the warehouse, a workflow is automatically kicked off to retrieve approval for the service and to request that managers build a service-level agreement governing its use.

"When I go to IT management, they don't care how many services are out there," the executive said. "But if we know the value of a service — which we get people to model once it is discovered — and we know how many reuse [instances] there are, we can start backing into the value of reuse."

Long-Term Challenge

Finding ways to show the value of an SOA remains perplexing for many corporate IT organizations, according to industry analysts.

A recent research report from Boston-based Aberdeen Group Inc., for example, noted that 41% of respondents surveyed at 284 companies have found that the biggest obstacles to SOA adoption is "limited visibility of SOA value."

Likewise, a recent survey of 400 IT managers by Evans Data Corp. found that justifying an SOA investment is one of the top four inhibitors to SOA adoption.

"Implementing a new technology architecture takes time and money, and [any new technology] has always been hard to justify and to ascertain an ROI," said John Andrews, president of Santa Cruz, Calif.-based Evans Data. The value of an SOA will most likely be realized over the long term rather than the short term, he added.

In the meantime, Andrews suggested placating senior management by building an SOA incrementally and choosing projects "where there is rapid need for change, and the reuse of a service can accelerate the ability for IT to react."

Linda Scotto, manager of applications development and support at the National Rural Electric Cooperative Association (NRECA) in Arlington, Va., said she has been able to justify her organization's investment in SOA by showing that it has helped boost customer satisfaction while extending the life of the organization's mainframe system.

Value of SOA

From 2006 to 2010, SOAs could help Global 2,000 corporations save up to $53 billion in IT costs by cutting software purchases.

SOA can help save up to 25% on application development costs when used over the entire development life cycle.

SOURCE: ABERDEEN GROUP INC., BOSTON

Prior to building an SOA, the association, which provides employee benefit plans to more than 900 cooperative electric utilities nationwide, had manually entered data into an IBM zSeries mainframe from changes customers had entered through its Microsoft SharePoint Portal.

"Our customers saw through the smoke and mirrors when there were typos [in company correspondence]," Scotto said. "We were getting bad egg on our faces."

So last November, the NRECA began installing DataDirect Technologies Inc.'s Shadow z/Services integration tool to let clients directly deliver information to the mainframe system via the portal and Microsoft's BizTalk server.

Since then, the NRECA has been processing changes to plans that are made by individual clients.

Last month, the association moved to expand use of DataDirect's tool by gathering requirements for processing group plan changes made by clients, Scotto said.

Some users are justifying SOA investments to management simply by solving problems.

Alan Anderson, director of application development at VP Buildings Inc., said his IT shop has never had to use management tools to justify the use of Web services to upper-level management. The executives "don't care how we solve a problem, as long as we solve it," he said.

The Memphis-based manufacturer of steel building materials this month will extend its SOA to the second of its five manufacturing sites to provide purchasers in its procurement department with real-time access to the status of inventory consumed on the shop floor.

VP Buildings is using SOA middleware from iWay to link its PeopleSoft inventory software — which is operated by an off-site firm — and home-grown Microsoft .Net-based manufacturing software.

Before launching a Web services link between the systems, inventory consumption had to be updated manually from the shop floor, a process that could take several days, Anderson said. Now, by pairing the integrated systems with bar-code labeling, inventory information can be updated in real time.

The selling point for using Web services for the integration, Anderson added, was the cost-effectiveness and simplicity of linking the applications compared with traditional hard-coded integration.

He noted that building a customized link between the systems would have cost about $175,000 and taken 18 weeks, whereas installing the iWay software took two weeks and cost $110,000. ▸

IT and Business Benefits

SOA BENEFITS FOR IT
- Better able to manage IT complexity
- Ability to reuse applications
- Faster IT implementations
- Lower IT integration costs

BENEFITS FOR BUSINESS
- Faster reaction to change
- Increased competitiveness

SHARED BENEFITS FOR BOTH IT AND BUSINESS
- Improved alignment of IT and business
- Lower overall cost of IT
- Lower IT maintenance costs
- Life-cycle visibility into business process management
- Development of new IT-enabled capabilities

SOURCE: ABERDEEN GROUP INC., BOSTON

SOA Requires New Testing Tools, Processes

BEFORE THE RECENT MOVE to service-oriented architectures, application testing mostly called for ensuring that a software application performed as it was designed, could handle specific loads and could be integrated with other isolated applications.

Throwing Web services into the mix is creating complexities that are prompting users to adjust traditional testing procedures.

Common monolithic applications were not written to be broken down into components, and they can be more easily tested than service-oriented applications, which can be dynamically tied together with components from other applications.

In addition, while an SOA can create flexibility by tying together multiple services to form new business processes, it also can create new points of failure at the various connection points – all of which need to be tested.

Patrick Plant, director of information services for the Anoka-Hennepin School District in Minnesota, said that the move to an SOA requires a shift in all parts of the development process – especially testing.

"In many cases now, you have more parts interacting with other parts," said Plant of SOA applications. Therefore, "you're also having to test the application interacting with other applications and other interfaces."

To help guide its SOA testing efforts, the school district has created matrixes noting all the possible combinations of browsers and operating systems that could be used to access its applications, Plant said.

The school district, based in Coon Rapids, Minn., is working with Hewlett-Packard Co. to help it build an SOA. The system will eventually link its 40-plus systems to provide centralized access to bus routes, student schedules and assignments, attendance records and lunch accounts.

Donald Marcotte, principal test engineer at Cardinal Health Inc., a Dublin, Ohio-based distributor of pharmaceuticals and medical supplies, has been using the Lisa SOA testing tool from Dallas-based Itko Inc. on an SOA project for the past month. The tool simulates users accessing the Web services, in order to gauge response times, Marcotte said.

> In many cases now, you have more parts interacting with other parts. You're also having to test the application interacting with other applications and other interfaces.
>
> **PATRICK PLANT**, DIRECTOR OF INFORMATION SERVICES, ANOKA-HENNEPIN SCHOOL DISTRICT

The SOA project at Cardinal Health involves using Web services to access internal company applications and a centralized database. He declined to provide more details because the application could provide the company with a competitive advantage.

Marcotte said he chose Lisa because it will let him use a single tool to test services running from the presentation layer to the database. "We have multiple layers to test, [and] it could be very expensive to buy a tool for each layer," he said.

In addition, Marcotte said, he needed a flexible tool that could easily change the tests it runs when the code in the SOA application changed.

– HEATHER HAVENSTEIN

AT DEADLINE

Sun Cuts Expected To Approach 5,000

Sun Microsystems Inc. late last week laid off an undisclosed number of workers worldwide as part of a belt-tightening that's eventually expected to claim up to 5,000 jobs at the beleaguered company. Sun said the layoffs affected staffers at all levels. The job cuts are part of a plan to save between $480 million and $590 million annually.

Microsoft to Issue 12 Patches This Week

Microsoft Corp. will release 12 security patches on Tuesday to fix holes in both its Windows operating system and its Office productivity suite. Ten of the patches will affect Windows, and at least one of those is rated as critical. One of the two Office patches is also rated critical, which means the flaw can be exploited by attackers to run unauthorized code on a PC without any user action.

AOL to Cut 5,000 Jobs Worldwide

AOL LLC will slash up to 5,000 jobs worldwide, or just over a quarter of its workforce, during the next six months as part of a restructuring aimed at bringing in more revenue. A source said job cuts are expected to be deep in Europe, since AOL plans to sell Internet access businesses in a number of countries. Also expected to be hit hard are the customer service and marketing teams of AOL's Internet access business, the source said.

Senate Votes to Back Cybercrime Treaty

The U.S. Senate has ratified a long-neglected cybercrime treaty that supporters say would allow greater international cooperation in cybercrime investigations. The Senate late last week voted to ratify the Council of Europe's Convention on Cybercrime. Of the 43 countries that pledged to support the treaty, the U.S. is the 16th to have signed it.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

Don't Just Search For Information...

... Get answers. Ever encounter a term or phrase in a document that perplexes you? Join the club. If you happen to have a cool, free applet from Jerusalem-based Answers Corp. running on your PC or Mac, you simply highlight the text and Alt-click, then, *voilà*, detailed answers appear from the company's Answers.com Web site and other online sources in a pop-up text box. Or you can use an icon on your Windows Task Bar or a Mac widget to enter text or questions. Or simply visit *www.answers.com*. All paths lead to the same answer. Jay Bailey, director of marketing, says the company has been going gangbusters since it moved to an advertising-supported business model. It has even told investors that it expects to make a profit by the end of Q1 2007 at the latest. Answers is a case study in how Internet business has changed. The company started in the 1990s as GuruNet with a downloadable licensed software product. When that didn't catch fire, it moved to software subscription sales. After that foundered, it morphed the technology into a customized product for direct sales to large companies. Another misfire. But now that the software is free, the company says it's going to be in the black. Go figure.

2.7M Lookups per day on Answers.com.

Give mobile workers tools ...

... to collaborate and manage files securely. Road warriors need to access documents, coordinate tasks with fellow workers and securely manage files, just like those folks tethered to their desks. So, argues Doug Young, CEO of LiveCargo Inc. in Greensboro, N.C., they need a Web-based collaboration environment that understands that access devices may not have the same bandwidth and processing power of their deskbound counterparts. LiveCargo's eponymous online service securely links to applets running on mobile devices that let end users manage file transfers, collaborate on documents and store unlimited amounts of encrypted data on LiveCargo's site. Later this month, the company will update its collaboration tool in the online service so multiple people can comment on, say, individual PowerPoint presentations by adding text to each slide or even by voice annotation that can be reviewed by others via a toll-free phone number and a unique document number. LiveCargo currently offers an OutLook plug-in and will deliver one for Lotus Notes users in Q4. Prices start at $4.95 per 256MB of online storage. Young says corporate discounts are available.

Mobile workers need collaboration tools, says YOUNG.

Toad 9.0 hops to ...

... market for Oracle users. If your SQL-based apps use the Oracle database, Bill Bosworth, director of product management at Quest Software Inc. in Aliso Viejo, Calif., thinks his tool should leap to the forefront of your database administrator's consideration for development and management. Quest's Toad 9.0, which ships this week, adds numerous canned reports such as a functional analysis of SQL source code. With the update, Bosworth says, you can establish scheduled code reviews and even reverse-engineer SQL code you didn't write. Pricing starts at $870 per seat.

2% Growth in DBA jobs in 2005, says Forrester Research Inc.

Global business strategy ...

... demands a multilingual approach. If your business spans the planet, you probably encounter language problems. Translation services have been around since the Tower of Babel, but the Web and, more specifically, software-as-a-service are changing the way information is localized. Kevin Bolen, chief marketing officer at Lionbridge Technologies Inc., a provider of globalization services in Waltham, Mass., says, "Localization is ripe for the centralization of the Web."

BOLEN: Centralize translation on the Web.

When Lionbridge translates documents, each word shifted into a new language is saved into a company's private online vocabulary. New documents can be automatically translated in part from the stored vocabulary so that the human translator only needs to fill in the blanks and smooth out the prose, saving significant time. Bolen says Lionbridge is now pushing shared vocabularies among its customers. By exchanging private vocabularies, companies can get information localized much faster, he claims. By the end of the year, Bolen says, Lionbridge expects to add 400 million terms to its 120 languages.

New programming module ...

... helps keep development plans on track. Next week, TechExcel Inc. in Lafayette, Calif., will release a companion product to its DevTrack tool for app developers. Called DevPlan, it creates a hierarchical view of an application's anticipated features, their relationships and dependencies, and which developers are responsible for building them, along with their deadlines. DevPlan becomes your repository of all related materials, such as user interface designs. According to product manager Paul Untenberg, DevPlan "gives developers a clear idea of what to implement before implementing it." The software module requires DevTrack and costs $2,000, plus $1,500 per seat.

_INFRASTRUCTURE LOG
_DAY 18: Everything is frozen. It's our processes. They're inflexible. We can't respond to change.
_Why did we lock ourselves in like this? Brrrr.
_DAY 19: The answer: IBM WebSphere middleware for Business Process Management. It lets us streamline business tasks. We can test our processes before we roll them out and monitor performance once they're deployed, and reuse is easy because it's based on a service oriented architecture.
_Everything's unfrozen now. Wow, it's good to feel my toes again.
IBM
WebSphere
Take the BPM with SOA Assessment at:
IBM.COM/TAKEBACKCONTROL/PROCESS

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BRIEFS

McAfee Patches Flaw In SecurityCenter

McAfee Inc. last week issued a patch for a vulnerability found in its SecurityCenter security software management tool. The vulnerability could allow an unauthorized user to run code on a remote machine. It affects SecurityCenter Versions 4.3 through 6.0.22. Security vendor eEye Digital Security Inc. notified McAfee of the vulnerability on July 19. EEye rated the flaw as critical.

CA Files '06 Annual Report With the SEC

CA Inc. filed its final fiscal 2006 annual report with the U.S. Securities and Exchange Commission, moving a step closer to putting some of its financial troubles behind it. The filing concludes an internal investigation into the granting of employee stock options. CA was originally due to release final fourth-quarter and full fiscal year results in late May but twice delayed the process as it uncovered more issues.

Sun CIO Named to Post in Federal Unit

Sun Microsystems Inc. CIO Bill Vass has been named president and chief operating officer of Sun Microsystems Federal Inc., a wholly owned subsidiary that focuses on government business. Vass replaces John Marselle, who is retiring, and will report to Scott McNealy, chairman of Sun Federal. Sun appointed Robert Worrall, previously vice president of IT, to replace Vass as CIO.

IBM Unveils More AMD-based Servers

IBM has added two blades and three rack servers to its BladeCenter family of computers powered by processors from Advanced Micro Devices Inc. The new servers will use AMD's Rev. F Opteron processor, which IBM officials contend will give IBM products an advantage over competing offerings such as Sun's new Sun Fire line, which uses the older AMD Rev. E design.

U.S. to Issue RFID-enabled Passports

August deadline to be met despite concerns of some security experts

BY MARC L. SONGINI

THE STATE Department is on track to start issuing passports containing radio frequency identification (RFID) chips this week, despite warnings from some security experts that such systems could be accessed or tracked by hackers.

The new program will start in the Denver passport office and be in full production through the agency's 17 passport facilities across the country by mid-2007. All U.S. passports are expected to include RFID chips containing personal biometric information by 2017.

Congress passed legislation in 2002 to add security to the Visa Waiver program, and in 2005 the U.S. Department of Homeland Security required that passports include digital photos and conform to international electronic passport standards. The State Department set the August deadline.

State Department personnel successfully beta-tested the electronic passports over the past year, said Frank Moss, deputy assistant secretary for passport services.

Moss contended that electronic passports improve security by making it harder to forge or alter such documents. All personal information on a chip must precisely match that in the printed portion of the electronic passport.

COURTESY OF THE U.S. DEPARTMENT OF STATE

U.S. passports will feature chips with personal data.

In addition, if an electronic passport is stolen, the chip has a unique identifying number that can be tracked by law enforcement agencies worldwide, Moss said.

He noted that extra memory space on the RFID chip may be used in the future to store biometric information such as fingerprint images. However, he said, no decision has been made yet on how to use the extra space.

Some security experts expressed concern over the use of a so-called contactless chip, which doesn't require contact with a scanner. The new passport's RFID chip can be read by a scanner, but it must be within 4 inches of the device, Moss said.

Given the fast pace of technology changes, and the 10-year life of a passport, it's inevitable that the RFID chip will become hackable and that technology will be built to access it from long distances, said Bruce Schneier, chief technology officer at Counterpane Internet Security Inc. in Mountain View, Calif.

Schneier contended that the State Department could have used an RFID chip that required contact with a reader. "I can think of no benefit for a contactless chip," he said. "The question is, If there is no good reason for RFID, why are they pushing so hard for it?"

Other experts downplayed such potential flaws. "The only vaguely legitimate arguments I have heard against e-passports is that they might permit someone 2 feet away from you to learn that you are American and blow you up, or permit someone 2 feet away to learn whatever might be stored on the e-passport," said Michael Shamos, a professor who specializes in security issues at Carnegie Mellon University in Pittsburgh.

"It's a balancing of risks. The e-passport will be much more difficult to forge and thus ought to reduce the prospect of terrorists getting hold of valid ones," he said.

The new passports will also meet specifications set by the Montreal-based International Civil Aviation Organization, a United Nations standards body, and are supported by some 27 other countries. ▸

GTSI Fixes Troubled $10M Supply Chain System

Spends $1M on improvements for PeopleSoft rollout

BY MARC L. SONGINI

GTSI Corp. says it has stabilized a troubled rollout of PeopleSoft applications after spending $1 million to fix problems that caused disruptions to its customer service operations.

MITCHELL: Hard lessons learned at GTSI.

The Chantilly, Va.-based supplier of systems to government agencies had disclosed in July 2005 that a $10 million-plus implementation of the PeopleSoft supply chain management application was hurting its revenue and preventing the company from delivering its products to customers.

The problems forced the company to back off projections that its annual revenue would reach $2 billion by 2007, up from $886 million when the project went live in 2005. The company reported $144 million in sales in the first quarter, which ended March 31.

The software, supplied by the former PeopleSoft Inc. in early 2002 prior to its acquisition by Oracle Corp., was to be integrated with PeopleSoft human resources and financial software that had been installed in 1997.

GTSI CIO Bob Mitchell said the supply chain software is now starting to work as planned after the IT operation learned some hard lessons and fixed several technical glitches. "The software is producing for the business at acceptable levels," he said.

Mitchell said the turnaround became apparent about five months ago, when the number of unresolved help desk issues reached acceptable levels.

The repair effort included the creation of what Mitchell called a "war room" of IT support managers who could work to quickly resolve difficult problems.

Mitchell said the technical problems occurred shortly after the installation of the software in April 2005 and continued to haunt the company for the first 90 days. Once most of the technical glitches were fixed, Mitchell said, other operational and management problems surfaced.

According to Mitchell, many of those problems were caused by a lack of input into the implementation process by the company's business users. "This led to dysfunctional behavior," he said.

In addition, said Mitchell, an abundance of consultants — 35 in all — hired for the project caused several problems early on. "We outsourced our brain," he said. Mitchell explained that the consultants didn't fully understand the need to customize the PeopleSoft applications to handle reseller service transactions.

GTSI's case shows that more is not necessarily better when using ERP consultants, noted Josh Greenbaum, an analyst at Enterprise Applications Consulting in Berkeley, Calif. If contractors don't understand a company's requirements, a project that's potentially useful can turn into "deadwood," he said. ▸

IBM.
_INFRASTRUCTURE LOG
_DAY 12: No one can get real-time answers. No one can collaborate. Unmanaged public IM is a security nightmare.
_Gil brought in a "collaboration accelerator." I said it looks like a cannon. He said I had a small mind.
_DAY 14: The answer: IBM Lotus® Sametime® 7.5. It's not just IM and Web conferencing, it's an affordable platform for running the business in real time. It's encrypted. Has tons of features like VoIP and location awareness. And it works seamlessly with leading public IM networks. Everyone has real-time answers now.
_We've even recovered most of our employees.
Lotus.
Download the Lotus Sametime 7.5 demo at:
IBM.COM/TAKEBACKCONTROL/SAMETIME
IBM, the IBM logo, Lotus and Sametime are registered trademarks or trademarks of International Business Machines Corporation in the United States and/or other countries. ©2006 IBM Corporation. All rights reserved. Information regarding Lotus Sametime 7.5 is subject to change by IBM without notice.

BRIEFS

Microsoft Sues Belkin Over Patents

Microsoft Corp. filed a complaint with the U.S. International Trade Commission against Belkin Corp. for importing products that Microsoft claims infringe on a patent it holds for peripheral device technology. The complaint contends that several Belkin mouse products use a technology for which Microsoft holds a patent. Licensing talks between the two firms have not been successful.

Ericsson Files New Samsung Lawsuit

LM Ericsson Telephone Co. filed a new lawsuit against Samsung Electronics Co. in a court in Texas. The suit charges Samsung with infringing on Ericsson mobile phone patents; it's related to a lawsuit that Ericsson filed against Samsung in February. The latter suit was filed after the two companies failed to agree on terms for a renewal of patent licenses. A Samsung spokeswoman declined to comment.

IBM to Buy MRO Software for $740M

IBM has agreed to purchase MRO Software Inc., a maker of asset and service management software, for about $740 million. IBM intends to incorporate the MRO products into its Tivoli software line. The company also plans to have MRO's software and management consultants provide services to its clients as part of a consolidated approach to managing all of its customers' industrial and IT assets.

CA Names Gopal to Head Business Unit

CA Inc. has hired former Symantec Corp. Chief Technology Officer Ajei Gopal to lead its enterprise systems management business unit as senior vice president and general manager. Gopal's appointment brings to a close CA's recent round of executive reshuffling, which started with this year's departure of several high-profile managers.

Mercury Customers Welcome Acquisition by HP, CEO Says

BY MATT HAMBLEN

Tony Zingale *arrived at Mercury Interactive Corp. in 2004 and took over as CEO after his predecessor and two other top executives were dismissed amid allegations related to stock-options irregularities. Even as Mercury continues to cooperate with an investigation by the U.S. Securities and Exchange Commission, it is in the midst of being acquired by Hewlett-Packard Co. Zingale spoke with* Computerworld *last week about the past year, the planned HP buyout and the coming integration of Mercury and HP's products.*

What do you tell your customers who are worried that the SEC investigation is not over? The restatement is behind us. We've completed all the necessary work in and around restating 10 years of financial results. We recertified all the company's revenues and expenses, so that set of issues is behind us.

What have you and the company learned through this process? We've learned that you have to stay focused on running your business. A company needs good corporate governance, good processes, and you've got to have a great business to keep your executive team focused on. The situation I came into at Mercury was one of having a great product line and a great business, but unfortunately, I came into a set of issues beyond my control that I had to clean up. What I was after was sustaining the business and the growth that Mercury was capable of.

Are your biggest customers worried about what will happen to Mercury products after the HP deal closes? I met with five different major customers after the announcement last week, and they were all thrilled for several reasons. First, HP is a brand that's known and highly recognizable and very valued. Combine that with HP's reach, investment capability, continued investment in software through acquisitions and the $4.5 billion acquisition of Mercury, and that was a big, big statement. Mercury is formidable in the business technology optimization realm, has testing prowess and IT governance capability. When you combine that with the richness and depth that HP has with IT service management and network management and OpenView products, you get pretty much an incomparable set in the market.

What is the future of Mercury testing tools, which account for 60% of Mercury's revenue? Yes, 60% is from testing, down from 80% in revenue from testing tools a year ago. It's still a thriving market, but we're moving more to applications management, IT governance and SOA governance. You always want to look through the windshield and see where the market opportunities are.

How much overlap is there between HP and Mercury products? Very little. There's certainly none in the testing realm, certainly very little in the IT governance realm and none in the SOA governance realm.

What will your role be? I'm working to get closure on the HP deal over the next 90 to 120 days, and then we'll see what happens. I'm also working with about 3,000 Mercury employees on integrating our technology with HP's. ▸

Microsoft Buys Health Care Software

BY HEATHER HAVENSTEIN

In a move that dramatically steps up its focus on health care IT, Microsoft Corp. in late July agreed to acquire software that can integrate data from hundreds of sources and make it available to doctors electronically.

Microsoft said it plans to update the Azyxxi software, developed at MedStar Health's Washington Hospital Center in Washington, so it can be used in hospitals worldwide.

Under the agreement with MedStar, two developers of Azyxxi and 40 members of the hospital's software development team will join Microsoft. The development team will continue to work in Washington, Microsoft said.

Financial terms of the agreement between Microsoft and Columbia, Md.-based MedStar were not disclosed. The deal is expected to close this month.

Craig Feied, director of the Institute for Medical Informatics at Washington Hospital Center, said Azyxxi functions as an "air traffic control system" for hospitals to solve the biggest problem facing doctors and nurses: a lack of access to critical data needed to make decisions about patient care.

"In the past, medicine and hospitals didn't know very much about software and informatics, and big companies like Microsoft didn't know much about health care," he said. "Going forward, we expect a blurring of those lines," said Feied, one of the creators of the software will be joining Microsoft as part of the deal.

First deployed in 1996 in the emergency department at Washington Hospital Center, Azyxxi works as a repository for all of a patient's routine clinical information, including EKGs, scanned documents, CT scans, X-rays, MRI scans and ultrasound images. It takes live data feeds from disparate systems in the hospital and integrates them, Feied said.

"Turn on Azyxxi, and the mortality rates drop," Feied added. "This stuff really does save lives."

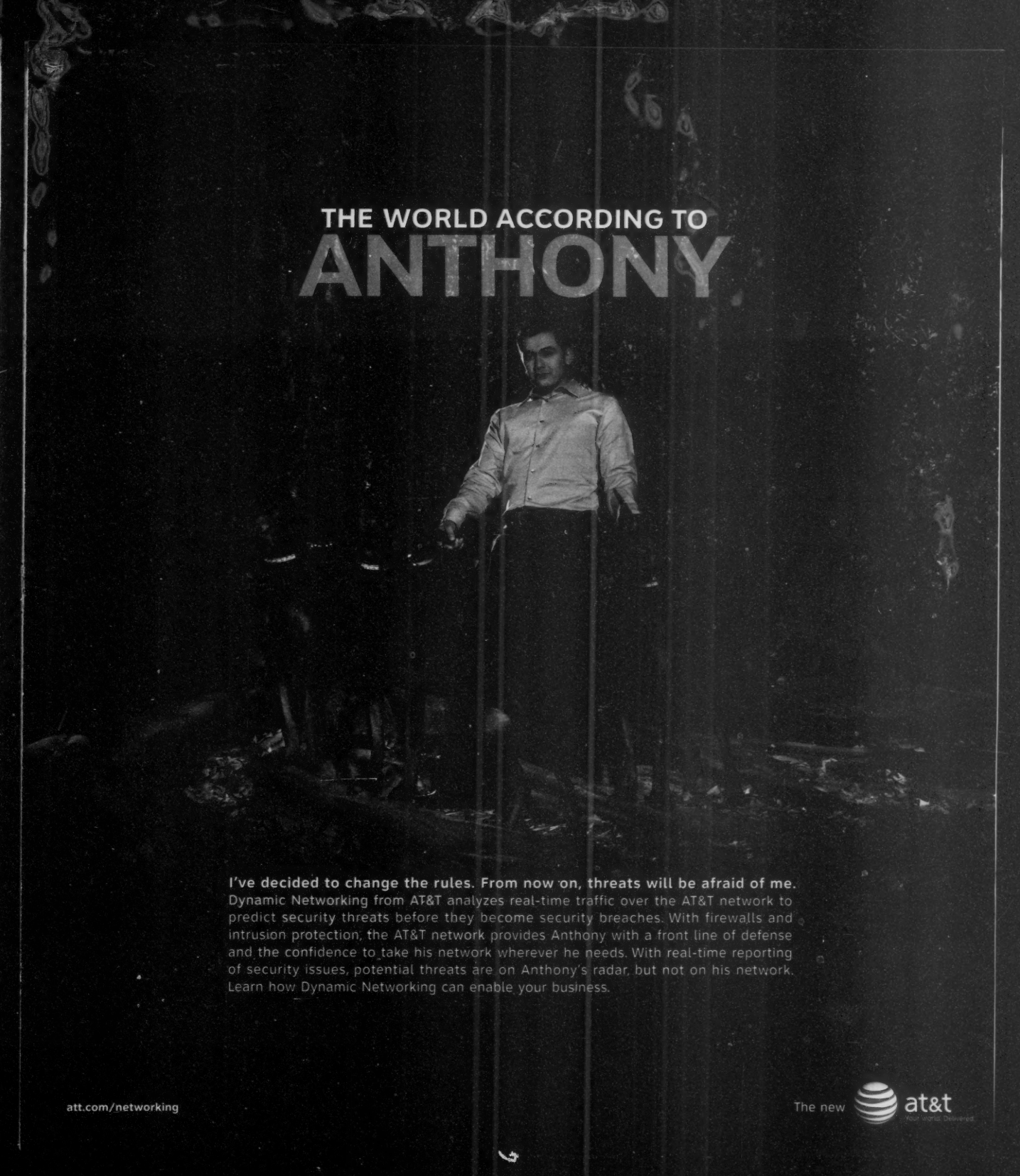
Scott Tiazkun, an analyst at IDC, said Microsoft is the latest large IT vendor to begin a strong push into the health care business by offering tools to providers, insurance companies and regional medical groups looking to digitize patient data and ease the process of exchanging that information.

Peter Neupert will oversee development of the Azyxxi software as corporate vice president of Microsoft's newly formed Health Solutions Group. He declined to provide a timetable for commercializing the product. ▸

Azyxxi Facts

MICROSOFT'S NEW SOFTWARE:

- Is now used in four MedStar hospital emergency rooms.
- Provides responses in one-eighth of a second.
- Can contain more than 12,000 data elements about a patient.
- Manages more than 40TB of data.
- Is built on the Microsoft .Net Framework and uses SQL Server.
- Can provide access to various devices, including pocket PCs and tablets.


THE WORLD ACCORDING TO
ANTHONY
I've decided to change the rules. From now on, threats will be afraid of me.
Dynamic Networking from AT&T analyzes real-time traffic over the AT&T network to predict security threats before they become security breaches. With firewalls and intrusion protection, the AT&T network provides Anthony with a front line of defense and the confidence to take his network wherever he needs. With real-time reporting of security issues, potential threats are on Anthony's radar, but not on his network. Learn how Dynamic Networking can enable your business.
att.com/networking
The new
at&t
Your world. Delivered.

Continued from page 1

E-voting

citizens' concerns for e-voting technology if critics' claims of the inherent security deficiencies get debated in court during the run-up to the fall elections.

One of the main points raised by the suit was the so-called sleepover policy, under which Haas directed that all the machines be released to poll-worker supervisors before the election. The "sleepovers" in the homes of the supervisors lasted from three days to more than a week.

"During these sleepovers, the voting machines were unsecured, subject to access by innumerable neighbors, strangers and family members, and stored without records or proof of actual chain of custody, eliminating the ability of any person to detect whether or not fraud or improper access to the voting machines occurred," according to the lawsuit.

"The sleepover issue is fairly egregious," said Lehto. Tampering with one card in one device conceivably could change race results, he said.

The suit alleges that keys for touch-screen voting machines were released to poll workers — which is a violation of state and federal law. It also accuses Haas of suppressing or not collecting relevant materials, such as audit logs and electronic programs and ballots, for potential review after the election.

In addition, the suit cites a recent report alleging that testers discovered a "heretofore unknown switch" in the circuitry of the Diebold TS touch-screen system, the predecessor to the TSx. This feature allows the machine to boot from an external source, circumventing the software and safeguards inside.

Haas declined to comment in detail about the suit, citing pending litigation, but he defended the sleepover practice as being common in California and other states.

"Supervising poll-workers take all supplies home following a training class so they are prepared. They are directed to keep it [the machine] secure," he said.

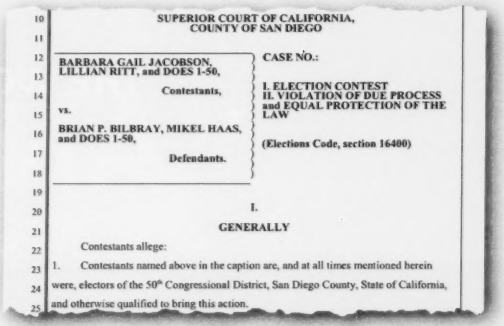
A spokesman for Republican Congressman Bilbray said, "Nothing has been brought to our attention that the election wasn't conducted with the utmost integrity."

Ion Sancho, head of elections for Leon County, Fla., and an outspoken critic of e-voting, acknowledged that the sleepover policy is commonplace, even in his jurisdiction. Nevertheless, he said that the voting machine vendors had yet to come up with proper guidance to address any potential vulnerabilities. "All it takes is a Phillips-head screwdriver to reprogram a voting machine," said Sancho.

A Diebold spokesman said that the alleged TS security flaw requires unfettered access to the machines, the complicity of elections officials and extraordinary technical expertise to succeed. Such tampering would also cause the Diebold machine to fail, he said.

This lawsuit is an example of what could happen in upcoming contests, said Brad Friedman, who writes about e-voting issues in his blog. "Is this the sort of thing we want to see happen in 435 House races, 33 Senate races and 20-something gubernatorial races around the country on Nov. 7 this year?" said Friedman.

Lehto said this is a top-priority civil case that will probably go to trial within 30 to 45 days. ▸



SUPERIOR COURT OF CALIFORNIA,
COUNTY OF SAN DIEGO

BARBARA GAIL JACOBSON, LILLIAN RITT, and DOES 1-50,
Contestants,
vs.
BRIAN P. BILBRAY, MIKEL HAAS, and DOES 1-50,
Defendants.

CASE NO.:

I. ELECTION CONTEST
II. VIOLATION OF DUE PROCESS and EQUAL PROTECTION OF THE LAW

(Elections Code, section 16400)

I.
GENERALLY

Contestants allege:

1. Contestants named above in the caption are, and at all times mentioned herein were, electors of the 50th Congressional District, San Diego County, State of California, and otherwise qualified to bring this action.

A San Diego lawsuit casts doubt on the viability of e-voting machines.

Open-source Router Takes on Cisco

BY MATT HAMBLEN

Open-source software for networking is still rare, but analysts and users say that could be changing. Start-up Vyatta Inc. last month released free software that provides basic router functions while running on a commodity PC.

San Mateo, Calif.-based Vyatta offers its Open Flexible Router software as a free download and charges an annual fee starting at $497 for technical assistance and upgrades. The company claims that the product, which is aimed at midsize organizations and branch offices, has the high availability and security that even large companies expect.

Early users said the open-source router is ideal when they need something simple and cheap. Lance Knox, a Pittsburgh-based networking consultant to nonprofit groups, said he installed Vyatta's software on a Pentium 3 PC that was "headed for the Dumpster" to route certain data between two buildings at a Pennsylvania mental health center. "It solves a basic routing issue and avoids passing on an exorbitant routing cost," he said. Even paying $500 for a router from Cisco Systems Inc. would have been tough for the nonprofit, Knox said.

He said the Vyatta router has been in production for about a month with no problems. Knox noted that he hasn't tested the router's scalability, but it "could definitely handle a branch-office routing need" for a larger business.

Sam Newnam, owner of SystemSam Technologies LLC in Raleigh, N.C., said he has used the Vyatta software for two weeks on a small Hewlett-Packard Co. rack-mounted server. "We didn't want to pay lots of money for features we'd never use," he said. "With an open-source package, we could keep things simple."

Going forward, he said his business could use open-source code for more complex networks without making large investments. "On top of cost savings in production, it opens up a whole new world of testing and brainstorming," Newnam said.

Future Market

Analysts said the Vyatta release is significant because open-source is just beginning to grow in networking. "In five to 10 years, open-source will be much more prevalent in routing and networking generally," said Rob Whiteley, an analyst at Forrester Research Inc.

However, Zeus Kerravala, an analyst at Yankee Group Research Inc. in Boston, said Vyatta's product might not catch on for a while because businesses aren't clamoring for inexpensive routers. "If people wanted a cheaper router, wouldn't the low-cost router companies have more market share?" he said. "I always say with open-source that you don't get what you don't pay for." ▸

Whistle-blower Lawsuit Alleges E-voting Fraud

A FEDERAL WHISTLE-BLOWER lawsuit has been filed that claims one e-voting company knowingly sold electronic voting devices that did not perform as promised.

But details about the suit are sketchy because of secrecy rules surrounding whistle-blower litigation, according to Matt Schultz, an attorney at Levin Papantonio Thomas Mitchell Echsner & Proctor PA, the Pensacola, Fla.-based law firm that is handling the case. Schultz was assigned to the suit, but the lead attorneys are Mike Papantonio and Robert F. Kennedy Jr.

Kennedy, son of the late New York Sen. Robert F. Kennedy, gained attention with a recent story he wrote for *Rolling Stone* magazine in which he questioned the outcome of the 2004 presidential election. The whistle-blower lawsuit is not related to the allegations in the story.

The lawsuit was filed about four weeks ago, but Schultz was unable to divulge in which federal district the filing took place. He was also unable to discuss which e-voting machine vendor is targeted, because the document is under seal.

According to Schultz, employees at one of the four major e-voting vendors in the U.S. have testified to misrepresentations by the unnamed company about the accuracy, reliability and security of the direct recording electronic devices. DRE usually signifies a touch-screen voting system.

The lawsuit is not related to any particular election outcome. "This is about faulty machines being fobbed off on the government and being bought with federal money under the Help America Vote Act," Schultz said. Among its other mandates, HAVA stipulated that by last January, every election precinct in the country had to have an e-voting system that allowed handicapped voters to cast ballots unaided.

The suit has been filed under *qui tam*, or whistle-blower provisions of the False Claims Act, and remains under seal until the attorney general's office decides whether it will carry the suit forward, said Schultz.

Proponents of electronically enabled voting devices such as touch-screen or optical systems say the machines can tabulate votes with much greater accuracy than older punch-card ballot systems. Critics, however, have long argued that electronic devices are unreliable and subject to hacking and, without a paper trail, can't be properly audited.

– MARC L. SONGINI

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GLOBAL DISPATCHES An International IT News Digest

BT Drops Subcontractor For U.K. Health Project

LONDON

LOOKING TO SPEED the delivery of software, BT Group PLC last week dumped one of the main subcontractors working on a 10-year project to upgrade the U.K. national health system.

A BT spokesman said the company is transferring Chalfont St. Giles, England-based GE Healthcare's projects to Cerner Corp. in Kansas City, Mo., in the third quarter. In January, GE Healthcare paid $1.2 billion to acquire IDX Systems Corp., the company originally contracted for the work.

GE Healthcare was hired to build software for the U.K. National Health Service's Care Records Service, which will make electronic patient records accessible through a nationwide network. BT Group is responsible for building the network.

The BT spokesman said the company expects that the change will lead to faster delivery of software to health care facilities. In a statement, GE Healthcare said the parting was amicable.

BT is one of four prime contractors involved in the U.K. government's £12.4 billion ($23.1 billion U.S.) effort to overhaul NHS technology in England and Wales, digitizing patient records and creating an advanced communications infrastructure.

Fujitsu Services Holdings PLC, another of the prime contractors on the project, had dropped Burlington, Vt.-based IDX in April 2005 in favor of Cerner.

■ JEREMY KIRK, IDG NEWS SERVICE

Microsoft Moves to Avoid More EC Fines

BRUSSELS

MICROSOFT CORP. has filed another batch of technical information with the European Commission in an effort to avoid further fines for violating a 2004 antitrust ruling.

On July 12, the commission fined Microsoft €280.5 million ($359 million U.S.) for not supplying the technical information required under the antitrust ruling.

At the time, the EC warned that further fines would be likely if all the requested documentation wasn't supplied by July 31.

The commission is still working to determine whether Microsoft has supplied the required documentation, said an EC spokeswoman. "I don't know when the analysis will be finished," she said.

Microsoft representatives in Europe could not be reached for comment.

The March 2004 antitrust ruling charged that Microsoft had abused its monopoly in desktop PC operating systems to gain advantage in the markets for workgroup server operating systems and media player software.

■ PETER SAYER, IDG NEWS SERVICE

Indian Outsourcing Not Slowed by Rise in Wages

BANGALORE, INDIA

INDIA WILL CONTINUE to be an attractive offshore outsourcing location for IT services in the coming years, despite 12% to 15% annual increases in technical staff salaries, said analysts.

The cost advantage of hiring engineers in India is likely to continue for at least five years, said Sudin Apte, senior analyst and country manager for India at Forrester Research Inc. in Cambridge, Mass.

India's demographics, including large numbers of software engineers graduating each year, continue to give it an edge over other countries, he said.

Aruna Jayanthi, vice president for outsourcing at Capgemini India, added that "in terms of ability to scale number of staff and everything else, I don't think any other country can offer what India can." Capgemini plans to make India its hub for offshore services delivery, Jayanthi said.

■ JOHN RIBEIRO, IDG NEWS SERVICE

GLOBAL FACT

Total projected public-sector IT spending in China in 2006. That total is expected to grow to $11.7 billion (U.S.) in 2010.

SOURCE: IDC, FRAMINGHAM, MASS.

Philippine Telco Extends Fiber-Optic Network

BAGUIO CITY, PHILIPPINES

PHILIPPINE LONG Distance Telephone Co. (PLDT) late last month launched a 10Gbit/sec. fiber-optic link to Baguio City as part of a $300 million (U.S.) nationwide network rollout that seeks to address emerging broadband markets.

In 1998, the Makati City-based telecommunications conglomerate invested $197 million to launch the nationwide digital fiber-optic network (DFON). Since then, PLDT has spent around $90 million more to add an IP-based network that can transmit voice, video and data services.

The $30 million DFON link to Baguio City, located in the northern province of Benguet, runs on two separate fiber-optic cables with a 10Gbit/sec. transmission bandwidth that can carry more than 120,000 voice calls, PLDT said.

"This is really not meant to meet current demand but to position Baguio City to invite more investments," said Eric Alberto, head of the PLDT corporate business group.

■ LAWRENCE D. CASIRAYA, COMPUTERWORLD PHILIPPINES

Nokia Tests Wi-Fi, Cellular Phones

ESPOO, FINLAND

NOKIA CORP. has begun testing technology that lets users make calls on both cellular and wireless networks and switch between networks without interruption.

Around 50 people in Oulu, Finland, are testing the new service, called Unlicensed Mobile Access (UMA), as part of a two-month pilot initiated by Nokia in cooperation with the city of Oulu and Helsinki-based telecommunications firm Finnet Ltd.

The new Model 6136 cell phones used in the test can automatically transfer voice or data connections from GSM networks to Wi-Fi when the device recognizes a compatible wireless network, according to a Nokia spokesman.

And when users make a Wi-Fi call or data transfer outside of a Wi-Fi network's coverage area, the connection is transferred to a GSM link without interruption, he said.

Nokia is the latest of several vendors, including Motorola Inc. and BT Group, to implement such technology. Other companies, including TeliaSonera AB in Sweden and Finland and T-Mobile USA Inc., plan to offer UMA service in the coming months.

■ JOHN BLAU, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

SAP AG plans to invest $1 billion (U.S.) in India over the next five years, CEO Henning Kagermann told reporters in Delhi last week. Kagermann also disclosed that by the end of 2006, 20% of the software maker's research and development budget will be spent in India. The company expects to employ 3,500 workers in the country by the end of the year.

■ JOHN RIBEIRO, IDG NEWS SERVICE

SanDisk Corp. in Milpitas, Calif., has agreed to acquire competing flash memory developer M-Systems Flash Disk Pioneers Ltd. in Kfar Saba, Israel, for $1.6 billion (U.S.) in stock. SanDisk officials said the deal should help the company quickly improve its position in the mobile phone industry. M-Systems will become a subsidiary of SanDisk at the close of the deal, expected in the fourth quarter.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Two top executives and an engineer from Taipei-based Via Technologies Inc. were found innocent of industrial espionage by a panel of Taiwanese judges. The case stemmed from a 2003 civil lawsuit filed by D-Link Corp. in Hsinchu over an alleged theft of chip-testing simulation software. Although Via and D-Link settled the civil side of the case out of court in August 2004, prosecutors continued the criminal proceedings. The two companies never revealed the terms of their settlement.

■ DAN NYSTEDT, IDG NEWS SERVICE

Wells Fargo & Co. in San Francisco last week said that it is setting up a software development facility in Hyderabad, India, citing a growing need for technology talent that can't be met solely in the U.S. It will open in the fourth quarter and house between 30 and 50 local staffers.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Cognos Inc. in Ottawa has opened a virtual innovation center for customers in Australia and New Zealand. It will employ one full-time worker and provide a forum for large customers to access industry peers, analysts and "performance blueprints," which are specific process and policy enhancement models sourced from clients.

■ DARREN PAULI, COMPUTERWORLD AUSTRALIA

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Microsoft

Microsoft to Roll Out Auto Dealer Apps

BY LINDA ROSENCRANCE

Microsoft Corp. and a partner are building an automobile dealer management system as the vendor looks to take advantage of a growing business.

The system is being developed for Microsoft by Infonizer ApS, a Copenhagen-based provider of IT services to car dealers. It will be part of the latest version of Microsoft's Dynamics AX ERP software, said John Reed, Microsoft's director of automotive retail solutions.

Microsoft's entry into the business is "a cooperative effort," Reed said. "Infonizer develops the software, and Microsoft lends its brand to help propel it into large markets like the U.S."

Microsoft will market the software under the moniker Dealer Management System (DMS) for Microsoft Dynamics AX, he said.

More Vendors Needed

Mark Rush, president of Ron Rush Lincoln Mercury in Columbus, Ohio, and a member of the National Automobile Dealers Association's IT committee, said the large market for such software needs more technology suppliers.

"This industry is an oligopoly, meaning that there are too few vendors," Rush said. "There are two predominant vendors, ADP Inc. and [Reynolds and Reynolds], that control an estimated 75% to 80% of the market."

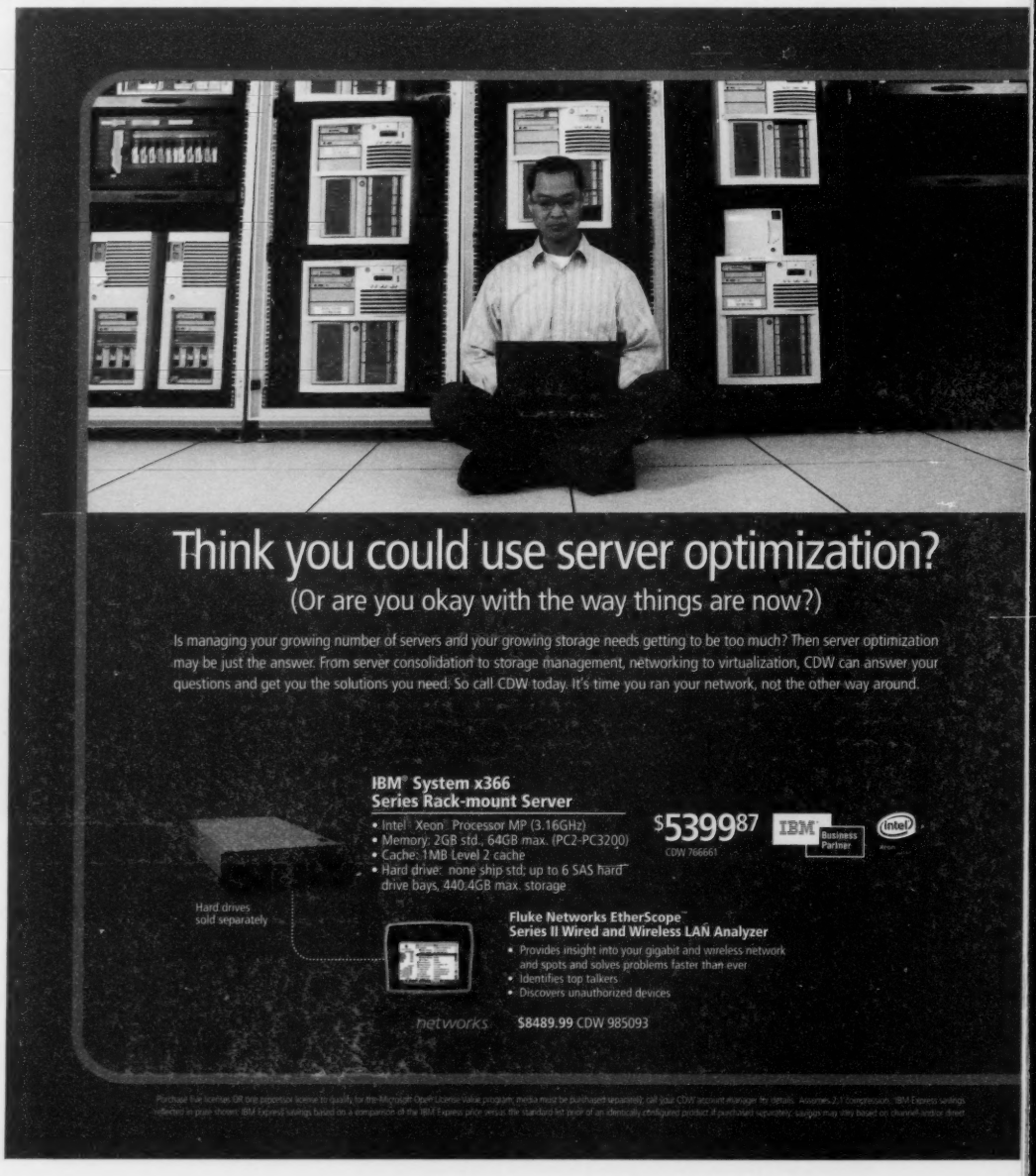
Rush said new delivery methods and software tools, combined with specifications set by the industry-sponsored group Standards for Technology in Automotive Retailing, have dramatically lowered the cost of entry for application vendors.

"I think the current state of affairs, the size of the prize — the size of the dealer business — and the ability to come to market quickly and at a lower cost than ever before" make business sense to Microsoft, Rush said.

Microsoft said its new system will streamline automotive retail and service business processes, cut operating costs and increase sales and business opportunities. The system will replace costly, ineffective and often obsolete IT systems currently operating in automotive dealerships and service departments, Reed said.

"We expect to have pilot implementations beginning in the first half of calendar year 2007," he added.

Infonizer's DMS for Microsoft is primarily for dealer groups and large automotive dealers and services, Reed said. He added that the product is designed to help dealerships operate most of their core business processes for sales, service and parts, as well as their basic business management accounting.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EMC Updates SAN Advisor Software

BY SHARON FISHER

EMC Corp. last week brought out a new version of its SAN Advisor product aimed at helping users improve storage-area network (SAN) design.

Version 5.3 of the SAN Advisor validation and design tool adds support for enhanced SAN validation and allows users to create customized best practices, according to EMC.

SAN Advisor is part of EMC's Control Center storage management application family.

Miguel Torres, a storage administrator at Mid America Bank, said Version 5.3 is a significant improvement over previous releases. The product lets Mid America engineers incorporate switches and zoning to help determine best practices for designing the bank's SAN, which was "the piece missing" in SAN Advisor, he said.

In addition, the software can scan the SAN, show any faults and communicate with the EMC E-Lab Support Matrix to let IT managers know which versions of hardware and software need updating, Torres said.

The bank, owned by MAF Bancorp Inc. in Clarendon Hills, Ill., operates in 83 locations, mostly in the Chicago and Milwaukee areas, and has 2,500 employees and $11.7 billion in assets.

The bank uses two EMC Symmetrix DMX800 arrays linked to a Unisys Corp. mainframe computer, two EMC Clariion CX700 storage arrays associated with the bank's Dell Inc. servers, and two Clariion CX500 arrays for replication, Torres said.

Memory Feature Included

SAN Advisor 5.3 does not yet recognize the bank's Dell servers, so Torres said he has to manually input that data each time — a three-hour process. However, the new version includes a memory feature, so he has to enter the data only once and the software remembers it until it's changed again, he said.

"Before, every time we did a snapshot, it would tell me it didn't recognize that kind of server," Torres said.

David Hill, principal of Mesabi Group LLC, a Westwood, Mass.-based research firm, said the new SAN Advisor's support of zoning is a major change from the earlier release that will let users more easily manage both logical and physical configurations of a SAN.

Hill said Version 5.3 also offers users greater flexibility in rule customization as well as enhanced reporting that shows when violations of rules have occurred.

SAN Advisor Version 5.3 is available now. Pricing starts at $5,000. ▸

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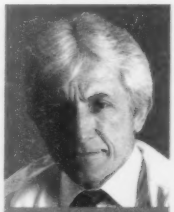
DON TENNANT

The Stigma Debate

IN MY EDITORIAL LAST WEEK, I took issue with a Carnegie Mellon University computer science professor's contention that the IT profession's reputation for being filled with "socially inept introverts" is "well-deserved." I argued that perpetuating that stereotype is harmful to the IT industry because it discourages young people from entering the field.



DON TENNANT is editor in chief of Computerworld. Contact him at don_tennant@computerworld.com.

I had no idea that position would cause so many forehead veins to pop.

"Aren't you just 'Mr. Cover-our-liberal-asses,' chided one reader. "Like all liberal 'journalists,' you love to paint the world in one beautiful rainbow of colors as though there is no difference in given populations of human beings." This reader, who said he's been in the field for nearly 50 years, was especially critical of my contention that the message young people should be getting from their educators is that people in the IT profession don't hug walls, they knock them down. "So let's tell them lies and paint a rainbow on the IT horizon for them," the reader scoffed.

Another reader told me to remember that I associate "more with the leaders of tech rather than the workhorses." He pointed me to a December 2001 *Wired* article titled "Geek Syndrome," the basic premise of which is that Silicon Valley is experiencing an autism epidemic because of the prevalence of people with geek genes. Maybe the answer is to prohibit programmers from mating.

A reader who described herself as a consultant in the trenches of mainframe programming echoed the suggestion that my view is skewed because I'm "interacting with CIOs and higher-level executives and people in the leading edges of the business." She said she agrees with the assessment that IT people are socially inept. "In fact, I think that 'socially inept' is putting it kindly," she said. "At the place I work now, most of my coworkers have the charm and social grace of potatoes. Many are extremely dysfunctional."

My problem with all of this is that I have trouble painting people with any kind of brush, "rainbow" or otherwise. That includes people like those in the Tarheel Chapter of the Association of IT Professionals in North Carolina. They may not be high-powered technology executives, but when I think back to the cookout I enjoyed at the home of one of the workhorse members a couple of months ago, the last thing that comes to mind is "socially inept introverts."

Still, most of my professional contacts are indeed CIOs and other senior IT executives. I've been impressed with the accomplishments of outstanding IT leaders like the CIOs of AFLAC, the Chicago Mercantile Exchange, HSBC Technology & Services, Southern California Edison, American Modern Insurance and Novell. The list goes on and on. But guess what. Every person on that list began his or her IT career as — you guessed it — a programmer.

One reader, Linux technologist and technical author Steve Litt, expressed his appreciation for last week's editorial. "I'm so sick of this silliness where we call them 'suits' and they call us 'techies' (or worse) and as a result, nothing gets done," Litt said. "When management, user and developer freely discuss things, I've found the results outstanding. The normal arguments against developer/user interaction are either 'socially inept techies' or 'ignorant user feature creep.' " The race analogy I used in last week's editorial, he said, "is a perfect way of showing just how harmful myths can be."

Actually, it was nothing more than a means to raise the discussion. Otherwise, nothing will change. And for the health of the IT profession, it simply has to.

Don Tennant

MICHAEL H. HUGOS

Agility Lessons Learned

AS I HAVE practiced agility and thought about what it means to the IT professional, I have come to a couple of basic insights. The first is that agility is a way of looking at the world and approaching situations that arise. The agile approach is well described by the phrase, "Think big, start small, and deliver quickly!"

We need to think big because our organizations are faced with big challenges, and as the tempo of events continues to accelerate, we need to be agile to keep up with what is going on. Yet there is also an element of wishful thinking in our talk about agility. It reminds me of the way we talk about eating healthy and working out regularly — we know it's a good idea, but we hardly know where to start. We are intimidated by the magnitude of the task.

MICHAEL H. HUGOS is a partner in AgiLinks LLC and a speaker. He is a member of the 2006 *Computerworld* Premier 100 IT Leaders class. His books include *Essentials of Supply Chain Management, 2nd Edition* (John Wiley & Sons, 2006). He can be reached at mhugos@yahoo.com.

So we need to start small, because there is no way to learn and employ agile IT all in one great leap. If we don't start small, we become overwhelmed and wind up just talking instead of doing. But the good news is that small things do add up, and small steps provide the forward movement we need to get the agility process going.

We need to deliver quickly because that's what agility is all about. Agility is a process composed of quick, small steps, each of which delivers a tangible benefit. As we start taking these small steps and reaping rewards from them, we build momentum; we learn; we gain confidence; we get good at agility.

The second basic insight is that the practice of agile IT is heavily influenced by four guiding principles. These principles build on one another to define an effective approach to any situation that calls for IT agility. They are:

1. Quickly build systems that are good, not perfect (deliver robust 80% solutions).

2. Automate only well-defined and routine activities (keep IT super simple — KISS).

3. Empower people, not computers, to handle exceptions (computers provide data; people make decisions).

4. Continually build and enhance systems based on experience (add new capabilities only as you need them).

The first principle means IT professionals find the most important requirements in a situation and deliver systems that satisfy those requirements in a matter of a few weeks or months. The key is to implement the first version of a system quickly, yet build it so that it can be continually enhanced as further requirements are addressed. Systems that try to address all requirements at once can't be implemented quickly and are too complex to be agile.

The second principle involves using techniques such as process mapping and data modeling to break apparent complexity into sequences of simple activities. This calls for the IT professional to resist temptations to create clever systems and tricky logic to deal with all possible events. Instead, one must factor out the routine activities in any situation and automate only them. Most situations are largely composed of routine activities, and because they are routine, they are simple to automate.

The third principle calls for people rather than computers to handle events and decisions that aren't routine. Agile systems simply capture the data related to nonroutine events and alert the appropriate people to deal with them. Since people are not bogged down with the routine stuff, they can bring their human intelligence (which is far more powerful than artificial intelligence) to bear, and these events can be handled in ways that can be done only by people.

The fourth principle means practitioners of agile IT always build systems that address what is most immediately needed in a situation and only what can be delivered quickly. Once those systems are put into production, later versions can be delivered as people learn new things and as new capabilities are needed. Agile systems evolve as situations evolve; they do not try to anticipate needs before they become clear.

Over the past several years, through continuous experience and lots of trial and error, these two insights have emerged. I have yet to encounter a situation where they do not apply, and I have paid the price when I have ignored them. Is it really this simple, or am I missing something? ◗

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READERS' LETTERS

Is Putting Chips in Children Desirable?

THE FLAW in Don Tennant's reasoning about implanting RFID chips in our children, presumably to keep them safe, is that the Wisconsin law he discussed does not prevent a parent from implanting a chip in a child ["Thinking the Unthinkable," Editorial, June 19]. It merely prevents someone else from forcing this to happen.

A much simpler, less mutilating tactic is to give a child a GPS cell phone.

Tennant is being driven by the drumbeat of fear. First, the chance of a child abduction is infinitesimal and most frequently is done by relatives or acquaintances.

Second, my daughters may trust my judgment, and I may trust theirs, but I would never extend that trust to mere technology or any vendors. I can't ignore the countless compromises of personal information by corporations and government agencies, or the plenitude of online con artists working to inflict financial or physical damage on those who are vulnerable or naive.

A much more sound and effective strategy is to build trusting relationships with our children and to teach them to avoid risky situations and use critical thinking skills. I know, that's easier said than done, but it is every parent's and citizen's responsibility.

To paraphrase Ben Franklin, if we are willing to sacrifice personal freedom for a little security, we deserve neither freedom nor security.

John Landis
Configuration manager, St. Louis

AS A father of two teenage girls, I am with Tennant on his concerns, but I am still unnerved by the prospect of anything that comes close to electronically tagging the average, law-abiding citizen.

What I fully support, however, is the tagging of anyone who preys on the average, law-abiding citizen. They should be tracked 24/7, 365 days a year for the rest of their lives. Abduct or abuse a child, get tagged. Use a gun in a crime, get tagged. Steal from the public as an elected official, get tagged.

We need to crack down hard on the offenders in our society and create strong disincentives for potential offenders, not create more issues for those of us who behave ourselves.

John Nordin
Vice president and CIO, Insurance Auto Auctions, Westchester, Ill.

I AM NOT a parent, but if I were, I would definitely "chip" my child. Two years ago, a microchip was the means by which my dog was returned (I know – not the same as a child, but as close as I get just now).

My husband is a sheriff's deputy, patrolling alone in a rural jurisdiction, often 20 to 30 minutes from the nearest backup. If he missed a radio check, I'd be thrilled for his department to have the ability to locate him.

And as a veteran, I wonder whether chipping soldiers might have enabled us to find two U.S. servicemen recently kidnapped in Iraq before they were killed. Or let us identify and locate MIA service members, avalanche victims and kidnapping victims.

Crime data shows that when a child disappears, the police usually contact the perpetrator within the first few hours, the child is usually within a mile of where he disappeared, and he is usually dead within 24 hours. If chipping a child is the difference between locating him before he dies or after, then does a potential impingement on my privacy mean more?

I do not dispute the arguments against chipping, but I also recognize that those arguments are based on the fallacious notion that personal privacy still exists in the modern age. I will gladly sacrifice that illusion to allow my husband and his colleagues to deliver a living child rather than a notification to a family.

Di Brown
Technology support manager, Central Kitsap School District, Silverdale, Wash.

FOR EVERY action, there is a reaction. Tennant's article focuses on the positive desired reaction. Life often has a different effect, it being complicated and involving the (irrational) decisions of others.

Would a creep be willing to cut someone open to pull out the GPS? Will a gadget be available soon to block the signal? Would the device work underground? Could a criminal clone the GPS and send people on a wild goose chase? Worse yet, could a trouble-maker use the tool to track a child?

S.G. Auge
Austin

What a Lovely Vista

THIS SOUNDS like the same article you did when XP came out ["Visual Tour: 20 Things You Won't Like About Windows Vista," *Computerworld.com*, June 1]. It boils down to, "Wah, things are different. I'm too stupid to find things. I want better, faster, more – but don't change anything."

Andy Fralick
IT director, Webasto Product North America, Fenton, Mich.

I AM GROWING very tired of *Computerworld* bashing Microsoft every chance it gets.

Consider how much day-to-day business and personal life is conducted on Microsoft products, and how easy to use and inexpensive those products are.

There is a big IT world out there. How about expanding your horizons a little for the good of IT, rather than bashing the big guys.

There's a reason Microsoft is so big – the vast majority of people and businesses trust its products, and they perform well at a good price.

Dave Shaffer
San Francisco

I'VE BEEN running Vista Beta 2 for some time now, and I believe that this article smacked the nail on the head with a jackhammer.

Everything I hate about Vista was covered.

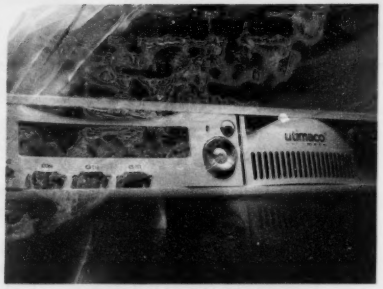
Mike Maloney
Oakville, Ontario

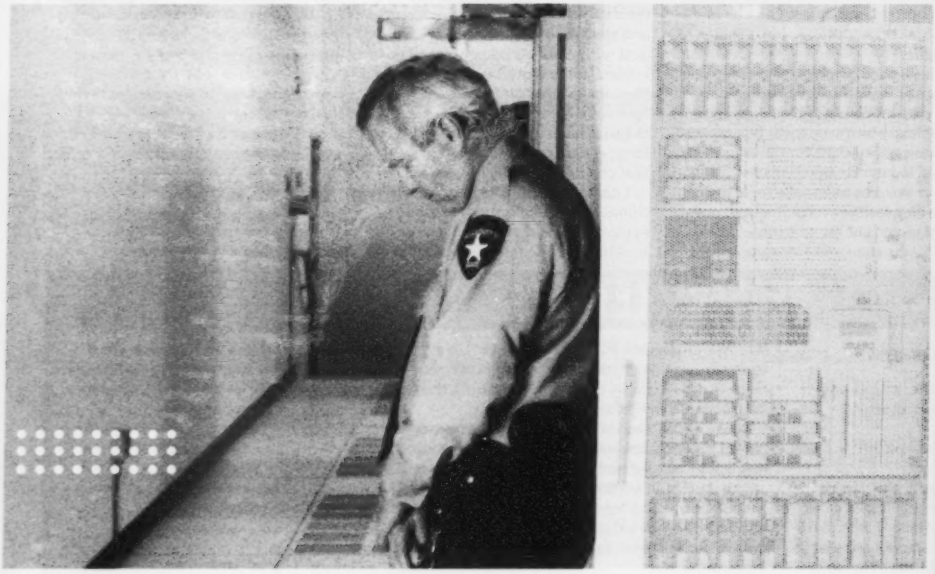
ONE REASON why Vista will not be my next operating system: I'm a happy GNU/Linux user ["Visual Tour: 20 Reasons Why Windows Vista Will Be Your Next OS," *Computerworld.com*, June 27].

Don Hensley
CIO, Hensley Custom Computer, Needles, Calif.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

Is this what you think of when you hear *secure processing*?





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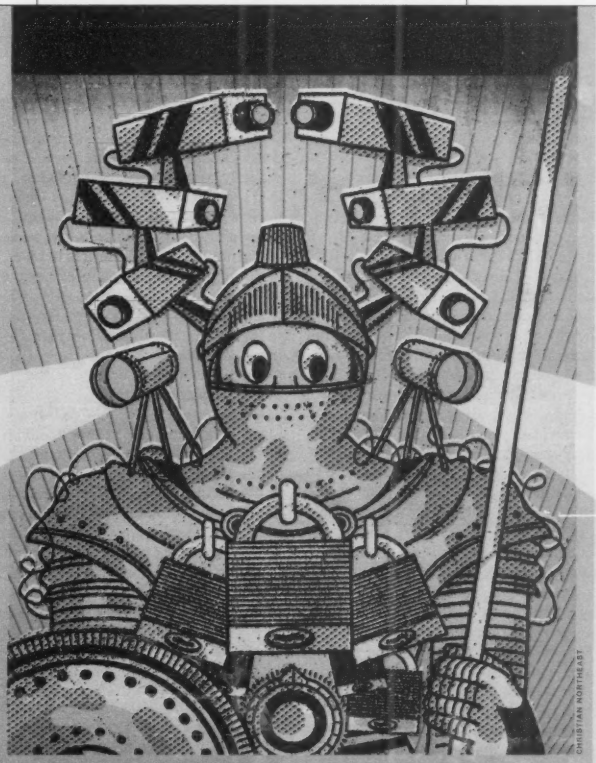
Skype Slips Into Business
Peer-to-peer, VoIP networks are moving beyond consumer use because businesses are finding they can use them to save money and improve processes. **PAGE 26**

FUTURE WATCH
The Virtual World Is the Real World
Ike Nassi of SAP Labs U.S. foresees transparent programming languages, event-aware computing and the merging of the digital and physical worlds. **PAGE 28**

SECURITY MANAGER'S JOURNAL
Alleged IP Theft Opens Door to Better Security
An investigation into an alleged theft of intellectual property gives Mathias Thurman the leverage he needs to boost security. **PAGE 30**



PRIVACY PREDICAMENT

As threats multiply, companies know that they must keep their customers' private information safe to stay in business and out of trouble with the law. Here's how they're doing it.

By Jennifer McAdams

THE PHILADELPHIA Stock Exchange flows 300 million stock quotes per day over an electronic trading system at rates that climb as high as 20,000 quotes per second during peak periods. The systems also churns out extremely sensitive trading reports packed with proprietary customer information that must be stringently guarded from outside attacks and unauthorized internal access.

And beefing up security isn't the only challenge facing IT executives at the PHLX. Stock-trading information must be accessible to customers at all times. Therefore, the PHLX streams stock quotes, a practice that requires technology officials to comb the system constantly for attacks. Security measures include alarms and triggers so sensitive that even benign cases of runaway streaming will mimic denial-of-service attacks and kick off a series of safeguards.

Like most other large organizations, the PHLX is armed with firewalls, intrusion-prevention systems (IPS) and elaborate audit trails. The goal is airtight security — and reaching that goal is a daunting challenge, considering the complex infrastructures that exist in most big organizations.

"We have placed layers and layers of multiple vendor products to surround our networks with so much protection that we have created a defense akin to the Castle Keep," says Bernard Donnelly, vice president of the PHLX's quality assurance group.

But those safeguards deal with only part of the threat. "Don't become so overly focused on keeping intruders out that you leave yourself vulnerable to internal threats," says Donnelly.

Employees can walk out the door with gigabytes of sensitive data on tiny removable storage devices. Often overlooked are everyday occurrences, such as loud cell-phone conversations that reveal too much in public places like airports, says Eileen Hasson, president of The Computer Company Inc., an IT services firm in West Hartford, Conn.

Sadly, there's no one-size-fits-all model for protecting private information. The good news is that IT officials can learn from people in industries on the front lines of guarding precious customer information. "There are no guidelines for enterprises, except perhaps those being adopted by financial services and health care industries," says Hasson. Those industries are leading the way on privacy protection because the stakes are so high for them.

"Failing to comply with HIPAA mandates regarding protected health information has severe penalties and would not only compromise but cripple our business," says Gary D'Amato, systems manager at Health Access Solutions, a Foster City, Calif.-based provider of IT services to the health care industry.

Follow the Leaders

At Care New England Health System in Warwick, R.I., compliance with the Health Insurance Portability and Accountability Act centered on an exhaustive gap analysis of the organization's computer network and major penetration testing — an elaborate exercise that often frames corporate security plans, says IT Security Manager Larry Pesce.

Gap analyses entail top-to-bottom reviews of security policies and often wrap in all rules and regulations imposed on a particular organization. In Care New England's case, the analysis started with mapping HIPAA mandates to internal security policies and procedures. It soon became evident that the organization's security mechanisms fell short of HIPAA requirements. Security

Building a Privacy Strategy

Security experts offer the following tips to help companies protect their customers' private information:

- **Inventory and map the location of private customer information.** Include in this exercise related applications, and note the business units tied to sensitive data.
- **Remember physical security.** "The line between physical and information security is blurring," says Lisa Kershner, general manager and director of operations at The Kimpton Group, a London-based commodities trading firm.
- **Make sure you have adequate leadership.** "We are seeing an increasing trend in the upgrading of the CISO position," says Barak Engel, chief security officer at Loyalty Lab Inc., a service provider for the retail industry.
- **Draft comprehensive but direct policies,** advises security consultant Ted Demopoulos. "Once you have a high-level policy in place, have a number of lower-level documents that address specific issues like password policies," he says.
- **Set priorities about which data to guard most heavily.**
- **Build the strategy carefully, and guard against unrealistic expectations.** "Without a prioritized list of issues that management will push, there's no hope that resources will be aligned and meet the commitments the CSO is pushed to make," says Kawika Daguio, director of Northeastern University's information assurance program.

– JENNIFER McADAMS

audits were in order, says Pesce. "I knew the only way to get the audit results I needed would be to start performing regular penetration testing," says Pesce. "From my experience, I knew that would give me the most accurate view of the network and provide me with the precise audit information I would need."

However, Care New England's gap-analysis efforts proved onerous. "Manual testing placed a tremendous strain on my limited budget and resources," Pesce says. "It was time-consuming to write exploits, ensure they were safe to run, perform the attack, and update and manage the process." Finally, he eased these burdens by adopting Core Impact, an automated testing framework from Core Security Technologies in Boston.

Core Impact is a series of agents and modules that scour a network for security weaknesses. A common user interface or console triggers Core Impact programs that then activate specific modules to perform operations such as packet sniffing or scanning of active ports. Core Impact modules are written in the object-oriented Python programming language to lessen the learning curve for those running the network tests. The modules dump testing data and activity logs into a centralized repository, which is able to recognize different operating systems and open ports.

"We were able to determine what security procedures and products were doing their job and protecting us. We were also able to find out what areas could be improved," Pesce explains.

Turning to IPS

After gap-analysis exercises, many large organizations first turn to an IPS to block sneak attacks, says Ted Demopoulos, a security consultant who works with institutions such as investment firm T. Rowe Price Group Inc.

When considering IPS technology, however, it's wise to check out many options and to think about the reams of information such systems will churn out.

"A lot of people are looking at IPS because it is a hot technology, and a lot of other people are adopting it," says Demopoulos. "But you have to keep in mind that these systems will generate large log files of all the things that might have been intrusions. The problem many times is that there is no one there to look at all the data these systems are creating."

Choosing an IPS that's easy to put in place and begin using is crucial, according to Howard Scott, IT director at Merscorp Inc., a mortgage processing company in Vienna, Va. Merscorp picked NitroGuard IPS, a system offered by NitroSecurity in Portsmouth, N.H.

NitroGuard is designed to examine and protect enterprise networks from viruses, worms, spyware, denial-of-service attacks and other threats. The system depends heavily on a large library of behavioral anomalies. It includes technology called a security event aggregation and correlation engine that's designed to sift through a multitude of events every second. It supports encrypted in-band secure management channels in order to slip into a configured network without customization.

"I've modified the rules and switched back to the default configuration with no problems. I can quickly turn on blocking, once the traffic-monitoring phase is complete," says Scott.

Many general-use hardware and software systems are already bundled with security features, but they are often underused by systems administrators. "I highly recommend that corporations make sure they are configuring their equipment to make the most of the features that come free with the stuff," says Hasson.

When it comes to proper configuration, what you don't know can hurt you, says Tim O'Pry, chief technology officer at The Henssler Financial Group in Kennesaw, Ga. When Henssler IT personnel asked users whose systems were exploited why they hadn't patched or configured their systems to prevent an attack, the most common response was, "I didn't know," he says.

There is plenty of blame to go around when patches prove outdated or improperly configured, says Dan Lukas, lead security architect at Aurora Health Care in Milwaukee. "Patches and updates are usually not maintained, as no one from the enterprise wants to take on the extra task of managing these devices," he says. "Many times, the vendor won't even allow anyone else to touch these devices, which poses an increasing security risk."

PHLX's Donnelly recommends a patch management tool and says the exchange uses HFNetChkPro from Shavlik Technologies LLC in Roseville, Minn. HFNetChkPro pushes patches necessary to secure a variety of Windows systems, as well as automatically patching products such as WinZip and Apache. Keeping outsiders at bay with up-to-date patches, IPSs, antivirus software and other protections, however, is not enough, Donnelly says. Internal users can pose lethal security threats. As many as 80% of security breaches can be traced to insiders, if you count incidents involving staffers, consultants or vendors, says Christopher Paidhrin, a senior security engineer at ACS Healthcare Solutions, a unit of Affiliated Computer Services Inc. in Dallas. "Auditing for abuse by legitimate workers is the challenge," he says.

THE ARSENAL

Bernard Donnelly of the Philadelphia Stock Exchange says "Not organizations that are serious about protecting customer information should have the following technologies in place."

- Automated audit logs to collect information from all platforms
- Software to distribute security policies electronically
- Tools to authenticate internal and remote users
- Packages to protect USB ports for LAN PCs
- Intrusion-prevention system capabilities
- Antivirus software for the LAN environment
- Software designed to keep internal users from sites laden with malware
- Patch-management products
- Systems to compare sensitive files and track changes
- Encryption

There's a slew of products designed to map changes to crucial documents and provide detailed logs on the activities of workers who have access to corporate information. For instance, Alameda Hospital in Alameda, Calif., traces access to user credentials, rather than IP addresses or other equipment identifiers, using the Identiforce appliance from Applied Identity Inc. in San Francisco, says Robert Lundy-Paine, the hospital's systems administrator.

"Since we base access on the user, we can be sure that this user accessed this protected resource at a specific time," Lundy-Paine explains. Identiforce cranks out detailed event logs, making it easier to put together compliance reports and analyze incidents. "The appliance allows us to capture activity through the device to a log file based on easy-to-configure parameters," he says.

Auditing tools designed to trace internal activity abound, but few instances of data compromised by employees turn out to be malicious. "Fifty-nine percent of the organizations we surveyed recently indicated that their last security breach was due to human error alone," observes Brian McCarthy, chief operating officer at the Computing Technology Industry Association, reporting the results of a recent poll of 574 organizations by Chicago-based CompTIA.

Human errors also mark incidental mistakes, such as those surrounding efforts to dispose of unwanted IT assets. "Consider that even a fax machine ink roll is a potential risk," says Vera Lewis vice president of SoCal Computer Recyclers Inc., an e-waste removal company in Harbor City, Calif. Most companies are not even aware of regulations for the disposal of sensitive data, such as those contained in the Fair and Accurate Credit Transactions Act, she says.

In the end, it's the corporate IT team that has consciously examined its security risks from top to bottom that stands to lose the least, says Ira Winkler, president of Internet Security Advisors Group and a *Computerworld.com* columnist. "Most corporate intelligence losses are not the result of high-tech crime," he says. "They are the result of human errors or system loopholes that can be easily and cost-effectively remedied."

Magazine of the Year and Best Overall Web Publication 2006

Just two years after being named Magazine of the Year by the American Society of Business Publication Editors (ASBPE), Computerworld has won it again! This prestigious award can go to any business publication in any industry category, so it is truly an honor worth celebrating.

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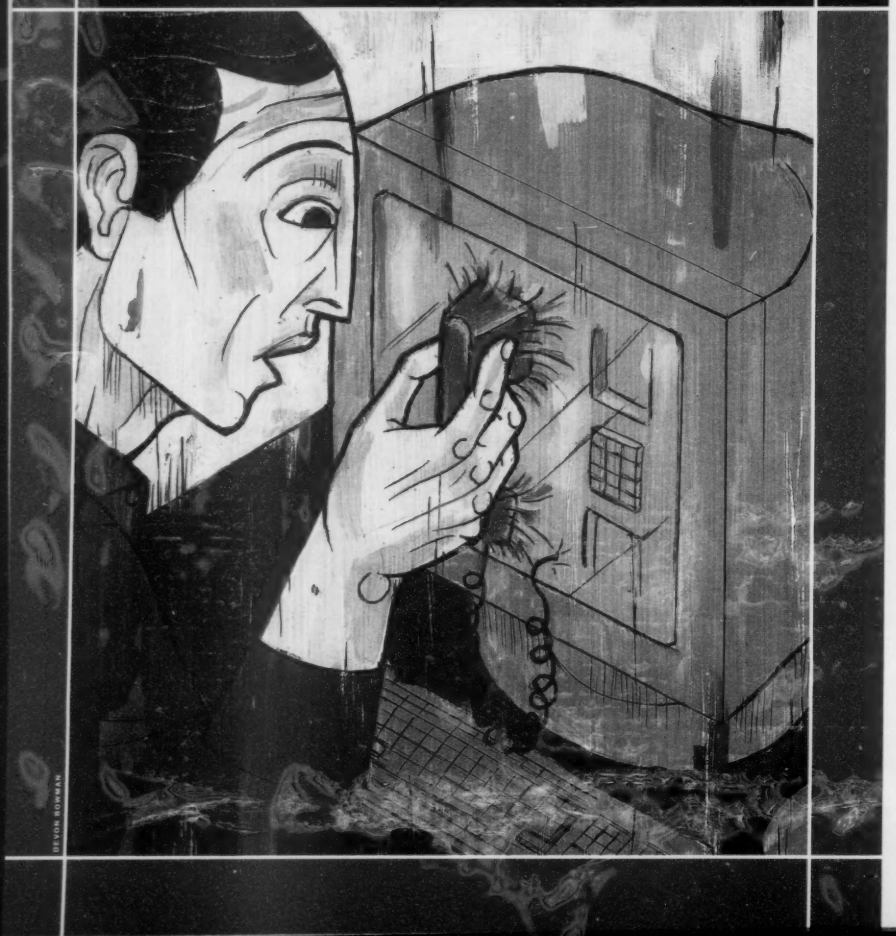
COMPUTERWORLD

The Voice of IT Management

SKYPE Slips INTO BUSINESS



Users of Skype and other consumer-focused peer-to-peer VoIP networks **are bringing the tools to work.** But rather than banning the technology, **some companies have embraced it.** Here's why.

BY ROBERT L. MITCHELL

TWO YEARS AGO, Mark Ehr and a few co-workers began using Skype to communicate between Proxima Technology Inc.'s Denver headquarters and its offices in Sydney, Australia, and Windsor, England. "I'd spent hours talking to Sydney," says Ehr, director of product marketing at the 70-person software company. Luxembourg-based Skype Ltd.'s peer-to-peer voice-over-IP software routes calls over the public Internet, offers good voice quality and supports conference calls — and it's free, he says.

Soon, top executives began using Skype for internal calls. "That set the tone for the rest of the company," Ehr says, and today Skype is the primary means of making intracompany calls at Proxima. Skype has also allowed Proxima to put off a planned migration to an internal VoIP telephony system.

Driven by convenience and potential cost savings, Skype and other consumer-focused public peer-to-peer calling networks have been quietly gaining ground in businesses, to the delight of some and the chagrin of others. While such public calling networks can cut costs, administrators must also sort through the management, compliance and security implications.

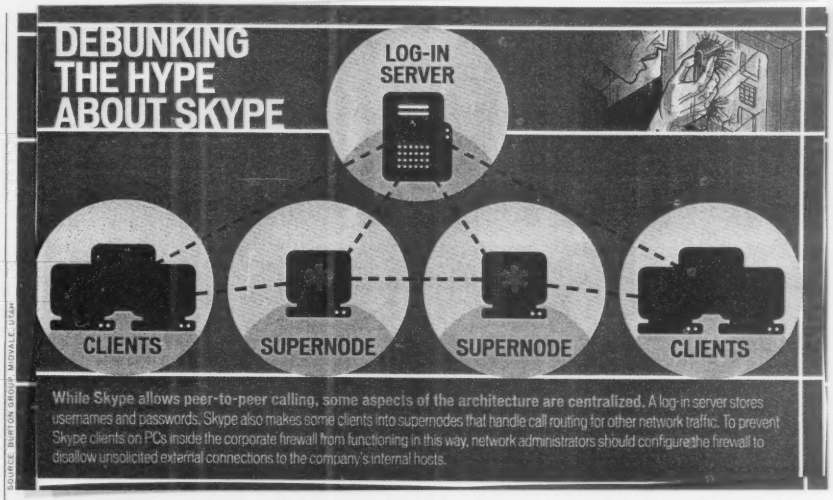
That needs to happen fast. As with public instant messaging services, peer-to-peer VoIP has taken root with consumers, who are increasingly using the programs at work. "Services like Skype are indeed coming into enterprises, brought in by users much in the same way IM services were brought in years ago," says Irwin Lazar, an analyst at Burton Group in Midvale, Utah. Currently, some 30% of Skype clients use the service for business calls, says Will Stofega, an analyst at IDC in Framingham, Mass.

Skype and programs such as Microsoft Live Messenger and Yahoo Messenger With Voice combine instant messaging and file-transfer capabilities with voice- and videoconferencing capabilities, integrat-

ing those into a single, proprietary soft client on the desktop. Contact lists are built by sharing user IDs in the same fashion as instant messaging "buddy lists." Most programs can only call users that have the same client, although a few, such as Gizmo, are more open.

Users particularly like the ability to see whether a person is online before initiating a call, says Lazar. "Voice mail is cumbersome and annoying. It's a lot nicer if you can avoid voice mail by sharing presence information," he says.

Skype, which claims more than 100 million registered users, established an early lead in public VoIP calling. It has traditionally offered the best voice quality, although it faces increasing competition. Skype was also the first to offer value-added services to connect VoIP callers to the public switched telephone network (SkypeOut) and to allow users to buy a local telephone number that PSTN users can call to reach a Skype softphone (SkypeIn). "Skype is successful because it just works. . . . It is easy to use and seamlessly traverses network address translation [devices] and firewalls," says Jeff Pulver, chairman and founder of Pulvermedia, which offers the competing Free World Dialup.


DEBUNKING THE HYPE ABOUT SKYPE
LOG-IN SERVER
CLIENTS
SUPERNODE
SUPERNODE
CLIENTS
While Skype allows peer-to-peer calling, some aspects of the architecture are centralized. A log-in server stores usernames and passwords. Skype also makes some clients into supernodes that handle call routing for other network traffic. To prevent Skype clients on PCs inside the corporate firewall from functioning in this way, network administrators should configure the firewall to disallow unsolicited external connections to the company's internal hosts.
SOURCE: BURTON GROUP MIDVALE, UTAH

Beyond Free

The advantages of peer-to-peer VoIP go beyond just cost savings, says Stofega. "From a consumer perspective, it's a price game, but from a business perspective, it's evolved into an application, a tool that can help business processes."

For example, Peter Dout, IT specialist at U.S. Robotics Corp. in Schaumburg, Ill., says employees use Skype to communicate from home with overseas offices in different time zones. "You don't have to be in the office to take that Skype call," he says. The company, which also sells Skype-compatible headsets, has formally embraced peer-to-peer calling and even includes a Skype client in its basic desktop system image.

But U.S. Robotics' use goes beyond interoffice calling. Customers can click on a button on its Web site and connect to its call center via Skype. Dout created a single Skype ID for support calls and uses SkypeOut to forward incoming calls from that ID to a regular PSTN number in the call center. Routing calls to the call center through the PSTN allows Skype calls to be logged and recorded just like any other incoming call. "The infrastructure I have set up for this call center all gets used. It's the same as a regular land-line call," says Dout. The configuration also enables U.S. Robotics to manage just one Skype ID for all incoming Skype calls.

We cut our telephone costs by a minimum of 20%.

Mary Galbavy, director or customer operations, U.S. Robotics

For Mary Galbavy, director of customer operations at U.S. Robotics, the key benefit has been cost savings. In the U.S., incoming calls through SkypeOut cost $.017 per minute versus $0.05 via the 800-number support line. The big savings, however, are realized in its European call centers. In Italy, for example, incoming calls over the PSTN cost $0.46 per minute versus $.023 with SkypeOut. Since users also pay a charge when calling in, they have an incentive to use Skype, and 26% of all callers in Italy do so. "We cut our telephone costs by a minimum of 20%," says Galbavy. Worldwide, "at least 5%" of U.S. Robotics' customers are using Skype, and customer use has been growing at an annual rate of 175%, she says.

Proxima's employees also use peer-to-peer calling to avoid toll charges when traveling. Users make calls via their laptops rather than incurring long-distance or cellular roaming charges, especially during trips abroad, says Ehr.

Proxima's CEO recently purchased a dual-mode PDA phone so he could use Skype's Pocket PC client over Wi-Fi — and uncovered a potential problem with peer-to-peer calling. The PDA lacks the power required to make Skype calls. "If you are the originator [of a call], your machine is doing all of the processing," Ehr says, and conference calls increase the workload even more.

The Downside of Free

Skype and similar programs also lack centralized management capabilities, such as the ability to review and retain call detail records, and they may represent security risks, says Lazar. "For companies subject to Sarbanes-Oxley or HIPAA, that has been the showstopper," he says. For other organizations, however, the choice is less clear.

Marvin Wheeler, chief operations officer at Terremark Worldwide Inc., a collocation services provider in Miami, says he sees remote users increasingly calling in over services such as GoogleTalk or Skype. "For spot use, it's great," he says.

Peer-to-peer voice services are still consumer-focused and offer few features to support business needs. Most lack a well-designed, central directory, so each user must maintain his own list of user IDs. Skype users must set up a prepaid account to cover per-minute SkypeOut charges or monthly fees for a SkypeIn number. Skype does allow administrators to set up a common pool that specified employee accounts can draw against, but invoicing and detailed call billing aren't available, and individual user IDs must be configured and administered individually. "I need an account. I want to be invoiced," Ehr says.

Wheeler is wary about the security implications of peer-to-peer calling. "For consumers, [the networks] are great. On a business level, you have to watch them. There's also a business risk involved," he says.

With Skype, for example, calls are encrypted, but the encryption scheme has not been subject to open, public review. Skype, which uses multiple ports to get through firewalls, is particularly difficult to block. It also offers an application programming interface (API) that developers can use to create presence-aware applications that can traverse the Skype network. Since Skype supports file transfers, it's possible that "Skypecasts" could transfer copyrighted content into or out of the enterprise, says Lazar.

However, security concerns may be overblown. "If the flaws were easy to exploit, someone would have figured out how to do it by now," Lazar says.

Michael Jackson, director of operations at Skype, says the latest client disallows access to the API by default and allows the file transfer feature to be disabled.

Calling for Convergence

Eventually, integrated clients within businesses will become common, says Lazar. For example, products like Avaya Inc.'s Converged Communication Server and Microsoft's Office Communications Server 2007, slated for release next year, offer a similar experience to services like Skype for internal calling. However, such products typically won't work with public peer-to-peer systems such as Skype.

With the gradual adoption of a unified client for internal use, users will benefit from using presence awareness with VoIP calling. As was the case with IM systems, however, administrators could face the prospect of having two integrated communications clients on user desktops — a private one for internal use and a public one for free, peer-to-peer calling outside of the company. Eventually, clients for internal use may offer some degree of federation with public peering services such as Skype, Lazar predicts. But in the interim, peer-to-peer VoIP services are likely to continue gaining ground, particularly in organizations that haven't yet moved to IP telephony and in small and midsize businesses where the auditing and controls are less strict.

The benefits are just too compelling for users to ignore, says Stofega. "It's a cheap, simple application that gets the job done."

THE Digital World IS THE Real World

So says Ike Nassi, who also talks about transparent programming languages and event-aware computing.

Ike Nassi *is something of a renaissance man in IT, having held senior technical positions at SAP AG, Cisco Systems Inc., Apple Computer Inc., Digital Equipment Corp. and several other companies. He's now the senior vice president for research at SAP Labs U.S. in Palo Alto, Calif. Nassi founded Firetide Inc. and co-founded Encore Computer Corp., and he helped start the Computer History Museum in Mountain View, Calif. He has held positions at Stanford University, MIT, Boston University and the University of California, Berkeley. Nassi played key roles in the design of the Ada programming language and the Mach operating system. He recently told* Computerworld's *Gary Anthes what's driving change in the software world.*

What major changes in IT are on the horizon? The integration of the real world and the IT world is going to happen, and it's going to accelerate. It's going to be driven by the increase in RFID in sensor networks and the rise of embedded microprocessors. We are doing things here that couldn't have been done three to five years ago. For example, we are working with the city of Palo Alto to outfit firetrucks with a variety of wireless communications gear so we can track fire engines back to SAP's back-end systems. One thing the fire department was interested in, for example, was . . . understanding why a fire truck would take what appeared to be a nonoptimal route to a fire.

What's another example of this kind of pervasive wireless network? The automobile has a tremendous number of microprocessors but has been slow to adopt networking. We are exploring back-end Web services [for] network-enabled cars. For example, my car told me I needed an oil change. But in the mail, I got a notice saying my car needed a software change. If the whole thing were network-enabled, I could have gotten an e-mail saying, "Your car needs to be serviced. Make an appointment by clicking here, and when you come in, we'll upgrade the software in your car." [There is] a potentially very large number of back-end services that can be delivered to the car or driver.

FUTURE WATCH

What's an example of a future corporate application of RFID and wireless networks? We are also looking at RFID-enabled assembly lines. One issue is that the back-end inventory management system is often not as consistent with the actual inventory on the assembly line or the parts depot. By tracking parts usage on the assembly line, you potentially have fewer line shutdowns and more-accurate forecasting and usage information. Also, if there are component product recalls, you have highly accurate information about where the faulty products were used.

What advice would you offer IT managers in light of this merging of the physical and digital worlds? One thing they should do is adopt existing standards as quickly as possible, like OSGI [Open Service Gateway Initiative]. Adopting a service-oriented architecture could be a huge win for the following reason: If they already have some sort of RFID application or sensor network application, they probably have a large amount of data already in their back-end systems. Replicating this information would raise [costs] and result in lowered accuracy. In one example application we did, we were able to combine existing repository information about properties of chemicals contained in drums to determine whether proximity of different drums of chemicals represented a hazard. In this way, we effectively made the drums "intelligent." To do something like this in a nonintegrated fashion would be potentially inaccurate and more expensive.

What is SAP doing to service-enable its software? We have spent a great deal of time implementing our Enterprise SOA in SAP NetWeaver. We are opening our software up to an ecosystem of partners. But I'd like to open it up even further and try to integrate and utilize some of the open-source enterprise applications packages that are coming out. There are ERP systems and CRM systems out there that are not SAP, and to the extent we can allow them to integrate [with SAP], it would be a win for customers. The open-source packages out there, things like SugarCRM, aren't going to get tied in by accident. It will be a cooperative effort.

These sensors and RFID devices will generate huge amounts of data. How will companies handle that? One topic in our research group is event-enabling some of these things. As the data comes in, you want to only be notified of exceptional conditions, not the normal stuff. You only want to know the stuff that humans have to deal with.

How will you adapt to new hardware architectures? Hardware vendors are not just throwing new designs over the wall and expecting software vendors to swallow them. The situation is changing, where they are coming to us and saying, "What do you think we should put into our architectures for 2010?" They are asking, "What are the opportunities for parallel processing [and] virtualization?"

Will you adapt SAP software to take advantage of the kind of parallelism possible in multicore processor chips? There are levels of parallelism granularity that we are exploring: distributed parallelism; coarse-grained virtual machine; coarse-grained process parallelism; and medium-grained, thread-based parallelism. As far as I know, we're not looking at fine-grained, instruction-level parallelism, but I wouldn't be surprised if someone within SAP were looking at that as well.

What's needed in programming languages? The DNA at SAP is a deep knowledge of business process. But if you try to see where that knowledge is embedded in our software — there are hundreds of millions of lines of code — there is no one place that you can point to that embodies this deep knowledge. So I see a future world where the business process is embodied in a well-designed piece of software, where the modeling is made explicit and is understandable by a wider audience than the hard-core C++ software engineer. Think of something like a scripting language that is designed just to support the business process.

What would be the benefits of such a language? It's to more easily automate business processes and modify them. And it's so the CIO can measure compliance. That's increasingly important. You want to know what the software is doing, to make that fairly transparent so you can guarantee compliance. We are exploring the possibility of doing a new kind of language — a graphical language or a scripting language or something that is sharply tailored to the needs of the business analyst.

I think embedding process models into a network fabric is another expression of the same idea. I have in mind something like Cisco's AON [Application-Oriented Networking] intelligent enterprise network message-routing system. It's possible to integrate business-oriented metadata to help optimize and manage network messaging traffic. ▸

IBM
_INFRASTRUCTURE LOG
_DAY 27: So many servers. So many servers crashing. So many servers to reboot. So many security patches to push through. So few Neds.
_We spend our nights and weekends and federal holidays rebooting servers, but it's not enough. Gil is interviewing half the I.T. guys in the state. I'm afraid he wants an army of "Neds." This is out of control.
_DAY 28: Gil's crazy. More I.T. guys aren't the answer. The business is on the road to servermageddon.
_I don't want an army of "me's" to manage my infrastructure. I want control. I want an i.

Alleged IP Theft Opens Door to Better Security

A former employee may have taken valuable intellectual property, but there are no logs to show his activities. By Mathias Thurman

LAST WEEK, I was called into a meeting with our company's legal counsel and several U.S. attorneys. The topic was the alleged theft of intellectual property by a former employee. An investigation was under way, and they needed information from me.

I am not privy to all the details — I don't know whether the former employee was able to sell the documents he is alleged to have stolen or put them to some other illicit use — but this incident gave me a great way to justify the security requirements I want to include in a new application.

SECURITY MANAGER'S JOURNAL

These are the facts of the case that I do know. This employee had resigned recently. According to our legal counsel, just before the employee's departure, he apparently transferred hundreds of design-specification documents and source code for one of our flagship products to a server outside our control.

I was in the room with the lawyers to help the prosecution prove beyond a reasonable doubt that the employee had logged into the data repository between certain dates, that he had transferred the data and, more important, that he knew that this activity was wrong.

The first part of the request was fairly straightforward, but I don't have a way to provide all the information I would like. I was able to capture logs that indicated that the employee used his SecurID token and VPN client to access the network on several occasions just prior to his departure.

The problem is that the applications that contain the design documents and source code aren't configured to log user activity. That capability just wasn't enabled when the system was deployed six years ago.

We can show that this user was on our network at certain times, but we don't have any logs to tell us the details of his activity on the servers or within the applications that maintain the intellectual property.

I had better luck on the question of whether the alleged thief knew that he wasn't supposed to transfer sensitive data outside the company. Our company has extensive policies and guidelines regarding data classification and the handling of intellectual property. We just have to prove that this employee read and understood this information.

Lucky Break

Thankfully, our company's corporate learning center maintains records that show which employees have successfully passed or completed various online classes and mandatory training sessions. Each year, employees must complete refresher training on a variety of topics. One of those is on intellectual property protection, and here's where we got lucky. This former employee had completed the online training just three months ago, with a passing grade! The training provides specific guidance in the area of transferring sensitive information outside the company without approval.

> This incident gave me a great way to justify the security requirements I want to include in a new application.

A side concern was that the suspect could argue that he had transferred the data to an external account so that he could work on the documents at home. But his supervisor told us that he wasn't given permission to do such work on his home PC.

Applying the Lessons

It will be interesting to see whether this investigation is fatally hampered by the lack of log data. That would certainly make it all the more imperative that our new product life-cycle management application is rolled out with full log capabilities.

I've mentioned before how important this PLM application will be. Our company produces hardware that sells for $30,000 to over $10 million. Our products take years to develop, and a lot of documentation is involved: component and parts data, bills of materials, engineering change orders and more.

For several years, I have maintained an application architecture policy and guide. I tweak it from time to time to keep up with new technologies or new areas of concern, but I've kept it generic enough that it can be applied to almost any enterprise-class application. I have divided the guide into various sections, including authentication, authorization, logging, encryption and separation of duties.

Within the logging section, I require that certain user activities be logged, such as log-in and log-out, the granting of additional privileges, and check-in and checkout of data. I also want exceptions logged, such as would occur when there's a sudden spike in check-out activity. That way, if a user who normally checks out, say, 10 documents at a time suddenly checks out 100 documents, we can look into it. Quite often, that sort of thing happens with employees who are leaving the company.

My goal is to ensure that security is baked into the application so we are able to prevent and detect most illicit activity without affecting productivity. We don't let ourselves get too crazy with requirements and security controls, however, because our basic assumption is that a determined insider will always be able to get around any security controls.

I have submitted my document on application security controls to the project team, and so far, they have agreed to almost all of my recommendations, especially those that involve the logging of activity and the protection of sensitive data.

The next step is to convert my recommendations into actionable control test points to ensure that the application meets the agreed-upon security controls. I've learned that such testing is necessary. I have found that project managers will often tell me that they're going to give me what I want — that security won't be an afterthought — in an attempt to appease me and get me off their backs.

With a test matrix, I can very easily determine whether the controls that were agreed upon were in fact implemented. That's what I call the day of reckoning.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

SECURITY LOG

Insurer's Claimant Data Sold on Net

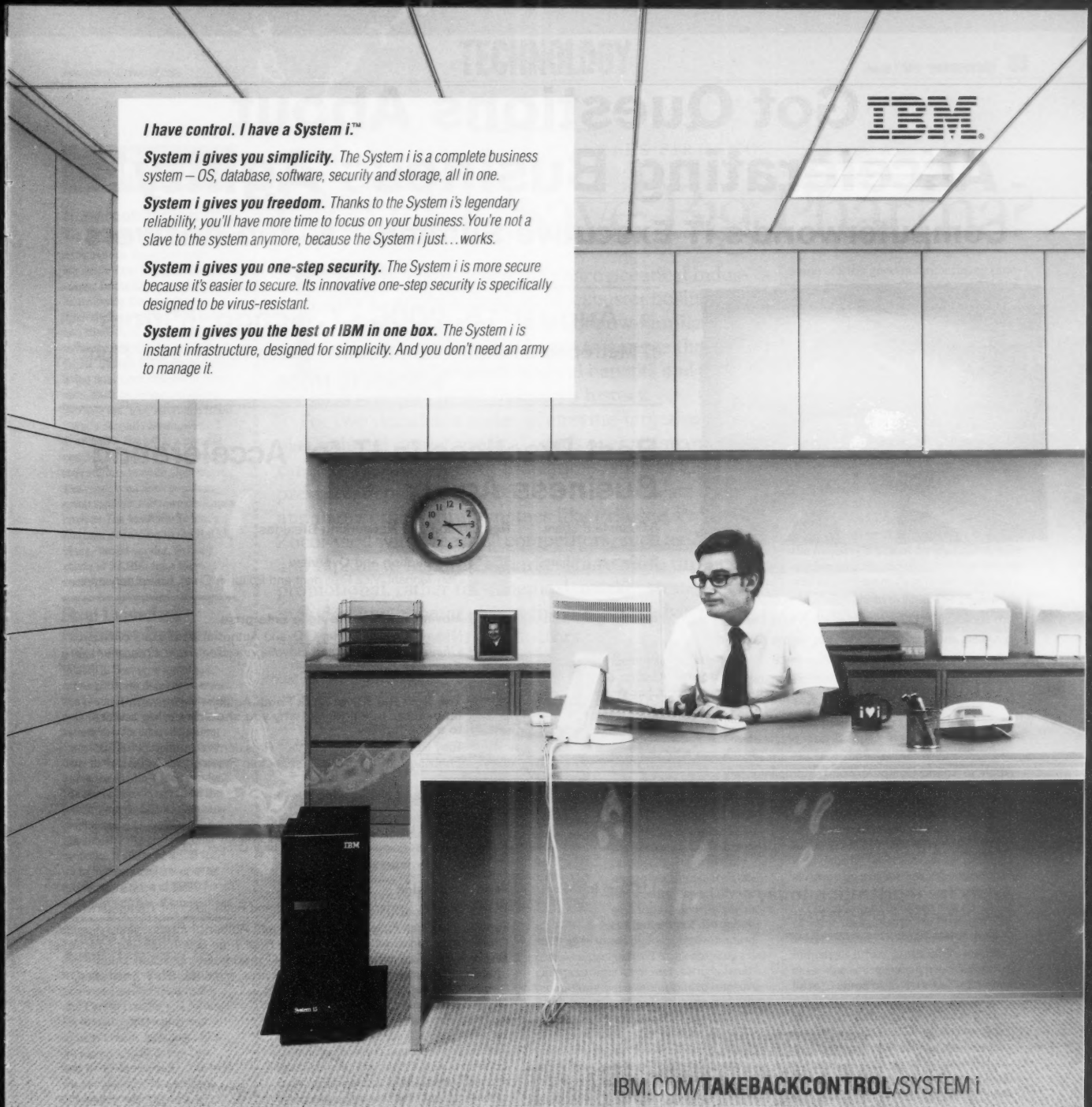
Sentry Insurance acknowledged that personal information of 72 workers' compensation claimants was stolen and sold on the Internet. Data belonging to more than 112,000 other claimants was also stolen, but the Stevens Point, Wis.-based insurer said there's no evidence that the larger block of data was sold. The information included names and Social Security numbers but no medical records. A Sentry consultant who was arrested by the Secret Service faces federal felony charges in connection with the theft.

CIS Employees' Data Exposed

A U.S. Citizenship and Immigration Services employee inadvertently posted to the U.S. Department of Homeland Security's intranet the personal information of 8,700 CIS employees. The data, including Social Security numbers and levels of pay, was accessed a dozen times before it was removed. Officials don't know how long it was available. The incident, the second exposure by CIS in recent months, is being investigated.

GeoTrust Rolls Out Credentialing Suite

GeoTrust Inc. in Needham, Mass., announced the availability of TC Enterprise ID Suite Version 2007. The company said the digital credentialing tools simplify public-key infrastructure rollouts by letting administrators automatically apply for, issue and integrate digital certificates for all users of Windows applications. The suite combines PKI digital certificate technology with smart-card management tools.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8:00am to 8:30am	**Registration and Networking Breakfast**
8:30am to 8:45am	**Introduction and Overview** Don Tennant, Vice President and Editor in Chief, Computerworld
8:45am to 9:35am	**Moving Towards the Agile Enterprise** Michael Hugos, Former CIO, and Author of *Essentials of Supply Chain Management* and *Building the Real Time Enterprise: An Executive Briefing*
9:35am to 10:10am	**The Next Big Wave: Work Force Agility – Information, Innovation, Intelligence (Why you shouldn't bring a knife to a gun fight)** Toby Redshaw, Corporate Vice President of Innovation, Data, Enabling Platforms and Architecture Services, Motorola
10:10am to 10:25am	**Refreshment and Networking Break**
10:25am to 11:00am	**IT End User Case Study: TD Ameritrade** Gary Greenwald, Chief Technology Officer, TD Ameritrade
11:00am to Noon	**Panel Discussion** Moderator: Don Tennant, Vice President and Editor in Chief, Computerworld Panelists: Michael Hugos, Former CIO and Author of *Essentials of Supply Chain Management* and *Building the Real Time Enterprise: An Executive Briefing*; Toby Redshaw, Corporate Vice President of Innovation, Data, Enabling Platforms and Architecture Services, Motorola; Gary Greenwald, Chief Technology Officer, TD Ameritrade

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BRIEFS

Supercomputing App To Be on HP Servers

■ Interactive Supercomputing Inc.'s Star-P interactive supercomputing software will be available this month on Hewlett-Packard Co. ProLiant and BladeSystem servers. The software will also be available for HP Cluster Platform systems using dual-core x86-64 processors, such as Advanced Micro Devices Inc.'s Opteron and Intel Corp.'s recently announced Xeon 5100. Star-P is a parallel computing platform that enables researchers to code algorithms and models on their desktops using familiar software packages such as The MathWorks Inc.'s MatLab, according to the Natick, Mass.-based vendor. Pricing starts at $7,995 for a four-socket server license.

Real Launches Multiuser Database

■ Real Software Inc. has released Real SQL Server, a multiuser, cross-platform database server. The product is designed to work with RealBasic and provide consistent results when migrating from RealBasic's built-in database to Real SQL Server, according to the Austin-based vendor. The application is based on the public-domain SQLite database engine and runs on Windows, Macintosh or Linux operating systems. It starts at $500 for up to five connections or at an introductory price of $999 for an unlimited number of connections.

PanGo Unveils Asset-Tracking Tool

■ PanGo Networks Inc. has announced PanOS Platform 4.0 and PanGo Locator 4.0 software for tracking the locations of system assets, including radio frequency identification tags and Wi-Fi components. The new version provides streamlined integration with third-party software products, expanded network alerts and a redesigned user interface, according to the Framingham, Mass.-based vendor. Pricing was not released.

CHARLES FIRNENO

Can IT Save Big Pharma?

IN THE 1980s, when the pharmaceutical industry's currently flagging blockbuster business model was forged, a series of now-familiar breakthrough medications began to emerge that would confer the broadest medical benefits and amass the largest profits in the industry's history.

For two decades, a series of enzyme-targeting therapies reduced unmet medical needs over a remarkable range of disease states or indications, such as high blood pressure, depression, AIDS, lipid-induced heart attacks and many others. Brand names like Prilosec, Prozac and Zocor vied with "me too" competitors, such as Zoloft and Lipitor, to maximize market share more through promotional, rather than medical, market strategies that included low-content, direct-to-consumer advertising and relationship-selling to doctors.

As that era comes to an end and is replaced by today's more fragmented and resource-constrained market environment, IT must move from a supporting role to a strategic role.

CHARLES FIRNENO is a freelance writer in New York who focuses on the pharmaceutical industry. You can reach him at **cfirneno@hotmail.com**.

Until recently, the pharmaceutical industry's information model has been one of counting P's: pounds, pills, packs, price points, profits, physicians and prescriptions. These enterprise and line-of-business IT functions incorporated standard database and manual systems within corporate departments or the industry's notorious functional silos: discovery research, clinical development, manufacturing/supply chain, and sales and marketing. Until recently, most discovery research information existed in written lab books or rudimentary sequence, molecular and tissue databases (laboratory information management systems). Clinical development information, from kinetic/dynamic/toxicology data to clinical measurements, was recorded in written formats such as the hard-copy clinical record form and simple electronic data repositories. Although more technically sophisticated, most supply chain information management was essentially outsourced to vertical suppliers and distributors. Sales and marketing tools never got past sales force and basic marketing automation to reach the realm of real CRM.

In the past five years, however, there has been no dearth of new initiatives that incorporate IT. High-performance and clustered computing have greatly increased in research departments, especially those seeking to incorporate more computational disciplines, such as systems biology, into standard research processes. Drug company clinical operations have increasingly used technology-based solutions to improve productivity and reduce costs and time to market. Electronic data capture (EDC) of clinical trial patient information has enjoyed roughly 30% to 35% adoption in industry-sponsored trials. Clinical trial management systems have also sprung up to assist with trial site and investigator management. Supply chain and manufacturing operations have been the most aggressive adopters of IT systems in the industry, with most companies integrating their supply chains and at least some of their good manufacturing practice functions into their ERP systems. Finally, virtually all drug companies have some kind of sales force planning and management system, and many are either planning or implementing broader integrated marketing systems.

The gaps, however, between current point solutions within the industry's functional silos and the need for more integrated information both in and across the entire value chain highlight the industry's single biggest challenge. The entire list of problems plaguing drug companies — from safety concerns, limited payer resources and confused customers to patent expirations and poor pipeline productivity — can all be traced at least in part to the industry's lack of an integrated information strategy. Solving these problems will require more than faster adoption of EDC or high-performance computing. It will require the type of business transformation that puts information and IT at the center of company and industry reorganization. Such business transformations are under way in the banking and airline industries today.

Most new drugs emerging from industry pipelines will target diseases with high levels of unmet medical need, such as cancer and multiple sclerosis. With health costs rising at twice the rate of inflation and surpassing 20% of GDP in this decade, high-cost emerging therapies such as cancer and immune-modulating medications, which may account for as much as 40% of industry profits over the next decade, will come under intense scrutiny by private and government payers, as well as physicians and patients.

The ability to demonstrate evidence of value measured in medical and economic benefits will determine the drug industry's future profitability and success. The source of such evidence will have to come from data and information repositories that are integrated across the value chain and with the rest of the health care sector. Those sources cannot be developed by drug companies without a complete transformation of the industry's business model to one that is grounded in an integrated information strategy. ▸

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IT MENTOR

Earning Trust as the New Guy

Whether you are starting a new job, taking on a new assignment or transferring to a different project, building trust is vital. IT Mentor Thomas Cutting has been there and done that. **PAGE 37**

Career Watch

See answers to readers' questions on careers, and more on employment prospects for those over 50 — and for U.S. expatriates in India. Plus, the scoop on telecommuting: Who wants it, and who gets it? **PAGE 39**

OPINION

The Alamo Dilemma

Faced with an impossible situation at work? You have more options than you might think, says Paul Glen. The tricky part is choosing the right one. He can help. **PAGE 40**

The Elusive Summer Getaway

Many CIOs are tethered to the office, even during vacation.

By Mary K. Pratt

ILLUSTRATION BY ALISON SEIFFER

Bernie Schumacher remembers the days before cell phones, laptops and handhelds enabled regular contact with the office even while vacationing. In fact, he was on a cruise during the Three Mile Island nuclear power plant meltdown in 1979, completely unaware of the crisis until his ship docked.

Back then, there was no guilt about being out of touch while away. Not so anymore.

"With the technology today, you do have that feeling of responsibility" to check in while on vacation, says Schumacher, global CIO for Novartis OTC in Parsippany, N.J. "But if you plan it right and have enough discipline, you can check [messages] very briefly, take that burden off you and have the rest of the day to have a good time."

For many IT leaders, the idea of vacation as a getaway is a thing of the past. Today's CIOs tend to take their technology along with them so they can stay connected to the office. The technology of choice? Smart phones. Most agree that they need to have their BlackBerries and Treos in tow, but the need to be connected — and the degree of connectivity — is as much about the individual as it is about the work.

"Knowing I have the technology gives me the comfort that if something happens while I'm gone, I can get involved or I can ignore it if I so choose," says Jo Hoppe, CIO at Pegasystems Inc., a Cambridge, Mass.-based software company.

Hoppe took a family trip to New Hampshire for a week in July and is planning another one this month. The vacation house has a phone but no answering machine and no Internet access. But Hoppe says she can get coverage for her BlackBerry there.

"There's a fine line between it being a tool and being a 'CrackBerry.'"

JOSEPH D. GILES,
CIO, UNDER ARMOR INC.

"I decided I don't need to do this on vacation."

LAURA FUCCI,
CTO, MGM MIRAGE

"I have more work/life balance because I carry my Treo."

AUTUMN BAYLES,
CIO, TASTY BAKING CO.

All the same, Hoppe doesn't want to spend her time in the woods sorting through e-mails. So when she's vacationing, she sets up an automatic message informing e-mailers that she'll be out of the office and won't have access to e-mail. It's a fib, because Hoppe admits she checks e-mails once a day, "when we're not doing something fun — just to make sure there's nothing urgent in there."

Hoppe's approach is common. Though it might seem that touching base with the office while away would be stressful, some say it actually helps them relax.

"The BlackBerry allows me to go on vacation," says Joseph D. (Jody) Giles, CIO at Under Armour Inc., an athletic apparel company in Baltimore. For instance, when his son recently made the Little League all-star team, "the BlackBerry allowed me to go to the game and still deal with some real-time issues we had in the office," he says.

Giles, his wife and their two children are planning a five-day trip to North Carolina's Outer Banks this summer and a two-week visit to China and Hong Kong sometime this year. He'll take his BlackBerry to the beach, where he expects to check messages twice a day. He doesn't intend to take it to Asia, however.

Even though he'll check in while on the Outer Banks, Giles plans to limit business interactions to high priorities.

But maintaining limits is sometimes easier said than done. Giles acknowledges that he's sometimes tempted to check in when there's really no need to. Resisting that urge takes some self-discipline, he says. "I ask, 'Do I really need to go check my BlackBerry again, or is it more important to throw the Frisbee with my kids?' " Giles says. "Both are priorities, and technology — the BlackBerry, specifically — allows me to keep those things in balance.

"But all things in moderation," he adds. "There's a fine line between it being a tool and being a 'CrackBerry.' We've all seen those addicts."

LEISURE LOST?

How has the round-the-clock lifestyle created by technology such as BlackBerries and mobile phones affected your leisure time?

I have more leisure time: **7.1%**

I have less leisure time: **59.1%**

I have about the same amount: **33.8%**

Do you set aside times when you are unavailable?

Yes: **68.2%**

No: **31.8%**

BASE: Survey of 1,311 senior executives worldwide, May 2006

SOURCE: ASSOCIATION OF EXECUTIVE SEARCH CONSULTANTS, NEW YORK

Cold Turkey

Laura Fucci learned that lesson from her 11-year-old daughter, who literally applauded her decision to leave her BlackBerry behind when vacationing at an Arizona ranch last year. "That's when I realized how intrusive it is to the family. At that point, I decided I don't need to do this on vacation," says Fucci, vice president and chief technology officer at MGM Mirage, a hotel and gaming company in Las Vegas.

Fucci acknowledges that she's "totally addicted to the BlackBerry." On past vacations, whether at Disneyland or some dude ranch, she estimates that she spent 20% of her time responding to e-mails and phone calls.

That constant connectivity is behind her, though. When Fucci, her husband and their two daughters enjoy some outdoor time in Utah or visit family and the beach in Oregon this month, work will stay at the office. If there's an emergency, a colleague can contact her via her husband's cell phone.

"I want to make sure I give quality time to my kids and my husband. So when they say, 'Mommy, Mommy,' I'm not saying, 'Hold on, I just want to answer this e-mail,' " she says.

John Glaser, who doesn't have a handheld and keeps his cell phone in his car's glove box, has a similar philosophy. The CIO of Boston-based Partners HealthCare System Inc., a nonprofit organization that includes 10 hospitals, takes three weeks of vacation each year. He spent a week skiing in Vermont earlier this year, and he plans to spend a week on Cape Cod with his family this summer and another week later in the year in the Virgin Islands. He says he might do some work-related reading during his vacations, and he generally checks his voice mail every third day. His office can reach him by phone in case of an emergency, but he says he can't remember ever receiving a call from colleagues during a vacation.

Glaser says that for him, it's important to get away completely. "All adults need to define the boundaries in how we work and what intrusions we will allow," he says.

But for Jesus V. Arriaga, using technology on vacation isn't an intrusion; it's a way to keep the pileup of work back in the office under control. The vice president and CIO of Keystone Automotive Industries Inc. in Pomona, Calif., usually takes two or three weeks off during the year. He, his wife and their two daughters are going to New York this summer. His colleagues will call him if there's an emergency, but he plans to take some time to check e-mail on his BlackBerry while his family gets organized each morning.

"The reason I stay on e-mail is to manage the flow so when I get back, I'm not punished because I took time off," Arriaga says.

Autumn Bayles, CIO at Tasty Baking Co. in Philadelphia, says that her Treo and laptop enable her to take — and enjoy — vacations. "I like to be connected," she says. "I don't know what I would do without it. And I'm much more likely to take vacation because of it. I have more work/life balance because I carry my Treo; I feel less need to be in the office. And if I want to, I can turn the damn thing off."

But, Bayles quickly admits, she doesn't do that very often. ◗

Pratt is a Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

In Touch: How Much Is Too Much?

Bernie Schumacher might vacation in Africa this year. He'll take his BlackBerry, but he knows it might not work, and he shrugs it off. "I don't plan vacations based on access," he says.

But in this era of constant connectivity, is it really OK to be unreachable for days, even weeks?

Executive adviser Karyl K. Innis says CIOs and other executives need to think twice about being out of touch. "The culture of the company makes a difference, and the stage of the company's growth makes the difference. If the company is in the middle of a major change, then it's best to stay in touch. If it's as close to business-as-usual as possible, then it may be all right," says Innis, chairman and CEO of The Innis Co., a career management business in Dallas.

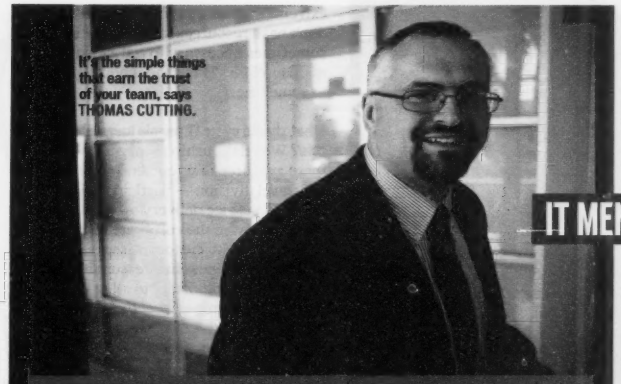
But a vacation on a technology tether may be no vacation at all, according to the Families and Work Institute. Its 2005 report, "Overwork in America: When the Way We Work Becomes Too Much," found that people who just relax on vacation are less likely to return to their jobs feeling overwhelmed by all they have to do than those who do some work while away. This held true even for those who said they feel overworked on the job. The institute polled more than 1,000 wage and salaried employees.

Similarly, Brad Harrington, executive director for the Boston College Center for Work & Family and a professor at BC's Carroll School of Management, says the center's studies have found that people who have the greatest "blur" between work and personal time are the least likely to report a healthy balance between the two.

"If we can work anytime, anywhere, that's the equivalent of working all the time, everywhere," says Harrington, co-author, with Douglas T. Hall, of *Career Management and Work/Life Integration: A Guide to Meaningful Work and a Meaningful Life*, to be published this fall by Sage Publications.

But some executives are using technology – or the gaps in it – to fight back, Innis says. She says she knows people who plan vacations abroad where connections are less reliable so they can say, "You won't be able to reach me," rather than risk flak for saying, "Don't call me."

– MARY K. PRATT



BETH JOEL

IT MENTOR

Earning Trust As the New Guy

BY THOMAS CUTTING

10 steps to clinching your most crucial leadership challenge.

WHETHER you are starting a new job, taking on a new assignment or transferring to a different project, building trust is vital. This became clear to me recently when I became the project manager on a supply and demand application implementation. Being the "newbie" came with the stresses of unfamiliar team members, new procedures and compliance requirements, preconceived notions and unknown pitfalls. I had joined the team based only on a couple of phone interviews and a vague description of the project. My first and most crucial challenge was to convince both upper management and my direct reports that I was trustworthy.

On this occasion, there already existed a certain level of trust, but that isn't always the case. Imagine if the first conversation with your new manager began with, "If it had been up to me, we never would have brought you in for this project." Or if your team lead said, "I was finally going to get to manage a project, but then they brought you in." It happens.

But even in an adversarial environment, I've found that you can help build trust faster by following these 10 practical steps:

1. KNOW THE PLAYERS. The onslaught of names in a new location can be overwhelming. To add to the confusion, there are names that are gender-ambiguous. Having only exchanged e-mails with one individual for two weeks, I referred to him in a meeting as "she." Slightly embarrassing. But quickly learning to match names to faces helps put both you and others at ease, so make the effort to do it. If it's a large project with lots of new people, consider creating an online photo album to help with team building.

2. CONFIRM YOUR ROLE. Many projects cross multiple business and functional groups. Although I was brought in to oversee the entire effort, several other project managers were already in place. After a few meetings to clarify the playing field, we created a communication plan and presented it to the sponsor to document the roles and responsibilities of the key players. On this project, there were no oversized egos in the group, but the document becomes even more important if there are.

3. IDENTIFY PRECONCEPTIONS. In a new environment, there are always preconceptions of what a project manager should do. As a newbie, there are naturally some things you won't know. Don't be afraid to ask. If possible, find another project manager who has been through it to help you understand what's expected. Check for a documented development process, and review the roles and responsibilities. Procurement is a good example. Is it your responsibility to order and track hardware installation, or is there an infrastructure team to handle this? The lead time on obtaining hardware is unforgiving if you don't learn the answer to that question until it's too late.

4. SET EXPECTATIONS. If left on their own, people begin to establish expectations of you, and that can set the stage for your success or failure. The key is to help set those expectations with them. Conversely, it's important for you to let others know what you expect of them. These can be difficult conversations, but having them establishes a foundation on which to build trust.

5. INVOLVE THE TEAM IN DECISIONS. Building trust requires trusting others. If you're new to the group, they already know that you are clueless on several levels, so don't try to fake it. Show the team that you're willing to take its advice.

6. DO WHAT YOU SAID YOU WERE GOING TO DO. Nothing kills trust faster than dropping the ball. If you have made a commitment, follow through. If it becomes evident that you can't meet someone's deadline, let him know in advance. Set a new time frame for accomplishing it, and then meet it.

7. DELIVER INFORMATIVE STATUS REPORTS. A clear and concise status report is an excellent tool for setting expectations and documenting the completion of tasks.

The two simplest and most important pieces of information to deliver are accomplishments for the week and planned activities for the next week.

As the project progresses, the financials, risks and issues can be added to the report. This will enhance trust in you and your team's ability to deliver on time and within budget.

Status reports are not running lists of all project activity. Pick key accomplishments, milestones, problems and risks to highlight, or your audience will lose interest. Maintain separate logs for the issues and risks and bring them to the status meetings for review.

8. ISSUE MEETING MINUTES. If it isn't written, it was never said. Decisions and commitments made during meetings are soon forgotten unless they are captured and distributed.

9. PLAY THE NEWBIE CARD. Whether you are new to the project, group or organization, there will be times when things don't make sense to you. With the vast number of acronyms and group-specific tribal knowledge, it's hard to divide what you should know from what you can't.

Don't worry; it's legitimate to play the newbie card. Starting your question with, "I'm new here; can you help me understand ?" frees you from being expected to know everything and gives the team an active role in bringing you up to speed.

10. BE HONEST. Honesty builds trust. A simple example of this is communicating progress on milestones. If you're running late on something, don't hide it or fudge the status. It's more important to communicate slippage than completion.

Trust is so hard to obtain, so easy to lose, so vital in any relationship. In the end, it's really the simple things that earn the trust of your team.

Cutting is a project management professional and senior principal consultant at Keane Inc. in California. Contact him at Thomas.Cutting@keane.com.

Suspicion, Secrets and Stupidity

If my trust-building suggestions don't seem to make sense, you might want to try these 10 newbie failure tactics. They're guaranteed to kill trust and threaten your employment.

1. Refer to everyone on the team as "Hey, you."
2. Jump in and start ordering people around.
3. Don't ask. Someone will eventually tell you what you need to know.
4. Don't set expectations. What people expect is their problem.
5. Show that you're in control by funneling all decisions through you.
6. Talk big. No one expects you to deliver everything you promise.
7. Keep 'em guessing. Don't waste time with status reports.
8. Forget about minutes. They're too time-consuming, and who could forget such important decisions?
9. Fake it. If you don't understand something, save face.
10. Lie. Nothing big, just enough to make you look good.

– THOMAS CUTTING

STRIKING A BALANCE

Relationship managers keep IT and business focused on the big picture.

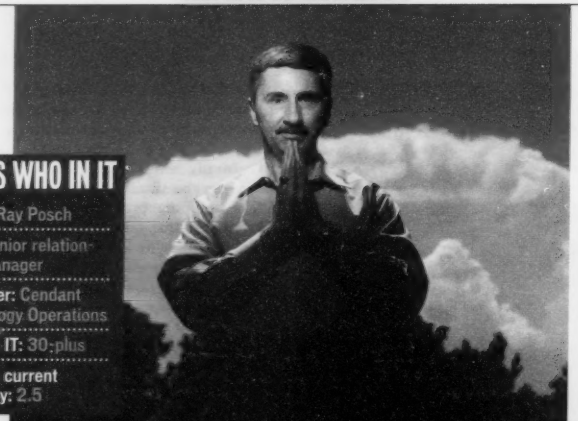


PHOTO BY RAY NR

WHO'S WHO IN IT

Name: Ray Posch

Job: Senior relationship manager

Employer: Cendant Technology Operations

Years in IT: 30-plus

Years in current specialty: 2.5

What is the most important contribution you make, and how do you make it? I facilitate the relationship between Cendant Technology Operations — the part of the corporate IT organization that operates the data center and networks — and the travel division of Cendant. That travel division consists of a number of business units. Galileo International, which runs the Apollo reservation system, and Orbitz.com are two of the larger business units in our travel division.

My contribution is to facilitate that relationship to help us deliver our IT services effectively. When I say "facilitate," a lot of what I do is to help resolve issues that business units are having with those IT services. Lots of those issues have to do with process, so it often requires making the process work better.

For example, one of the project managers might come to me with a need for an outsourcing partner to provide very specific services or changes. I help to make the request process work properly so their changes get done and delivered on time. On the surface, you might expect everything to work perfectly [without facilitation], but it doesn't always.

What is the most important IT skill/aptitude you need to do your job? A lot of my relationships are with IT people on the business side, so to relate to them and their projects and their issues effectively, it's very important in this role to have a lot of real IT experience. I have experience with mainframes, distributed systems, networks.

Additionally, attention to detail and good analytic skills are important because there are always a lot of interdependencies, and even a simple change could affect other applications or parts of the infrastructure.

What is the most important soft skill or personality characteristic you need to do your job? The role certainly takes good people skills, but probably the most important is balance. As a relationship manager, I have to be objective and fair to both sides — corporate IT and the business units — in order to negotiate compromises and help both sides make good decisions for the right reasons. It also takes good consultative skills: asking the right questions to get to all the requirements and issues, and listening carefully to what they're really saying, because sometimes things are going on behind the scenes.

What is the biggest misconception about what you do? I think some people, particularly on the business side, might have the misconception that I'm an administrative gatekeeper. But I try very hard to be a good consultant and facilitator and not a bottleneck.

What do you like best about your job? I really enjoy the internal management consulting role. I like the consulting aspect of digging in and understanding customer issues and helping to solve the problems. I always like it when the customer thanks me for helping to resolve a problem; then I know I'm making a difference.

What do you like least about your job? There are times when my customers make demands that are unreasonable — like asking to get something done in an extremely short time frame when we don't have resources to deliver — so it's sometimes necessary to tell a customer no. I don't like to tell them no, but I have to sometimes.

What should other IT people know about your role? We relationship managers — and there are three of us currently supporting the travel division — participate actively in the IT service delivery process. In doing that, we rely on the corporate IT people to be responsive to customer issues, so positive responsiveness in a reasonable time frame is very important to all of us having satisfied customers. Sometimes I think IT people don't always understand the importance of that customer service function.

What should business people know about your role? First, they should know that we are advocates for the business. We support their needs. That's our primary job: to make them successful. But relationship managers also have to be objective and balanced, and understand and support both sides. Sometimes the business makes requests that are unrealistic or outside established process or beyond IT resource levels, so it's important that they understand that our role is to be objective and help both IT and business see the whole picture and work together successfully.

What would enable you to do your job better? The one thing that comes to mind is that the business units often should involve us earlier in projects, particularly if they can look ahead and see that they will have issues that need to be managed. Unfortunately, there is a tendency to wait until those issues have become immediate problems instead of having planned ahead.

If you were not a relationship manager, what would you be? Probably an IT account manager supporting external customers. In my previous role, I was doing that and I very much enjoyed it. That really is relationship management, but maybe with a little narrower focus. Otherwise, I would probably be a project manager.

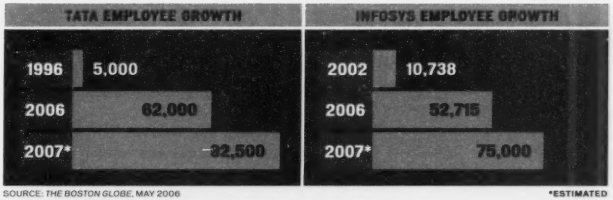
How does the future look for your role? Generally, I believe that relationship managers will become more and more important and more common because they're key in helping IT align effectively with the business. As for my own future, Cendant is spinning off its divisions as four separate companies this year, and I will be employed by Travelport, the travel services company. Travelport is very much information-technology-driven, so I'm confident that I will continue to play an important role within their IT organization. They need experienced people who understand both technology and the business.

Interview by Kathleen Melymuka.

Career Watch

Is Your Future in India?

Tata Consultancy Services Ltd. and Infosys Technologies Ltd., two large Indian technology firms, are increasingly scouring the world for employees. Some of Tata's and Infosys' U.S. hires work in the U.S. and other Western countries, but many can be found in the companies' facilities in Bangalore and other Indian cities. John McCarthy, an analyst at Forrester Research Inc., told *The Boston Globe* in May that there are now more than 10,000 U.S. expatriates working in India for Indian IT consultancies and other outsourcing companies. Few tech companies are growing as fast as the two Indian giants.



SOURCE: *THE BOSTON GLOBE*, MAY 2006 *ESTIMATED

50+ Workers Loom Large In Retention Policies

RETAINING OLDER WORKERS will be a key challenge for companies in coming years, says John Venator, president and CEO of the Computing Technology Industry Association (CompTIA). In a column posted on *Computerworld.com* last month (" 'Perfect Storm' on Horizon for U.S. Labor Market," July 10), Venator notes that more than 1.5 million new computer- and IT-related job openings will be created over the next six years, but the U.S. will have only half that many qualified graduates as a result of the declining number of students enrolling in math and science courses.

CompTIA and nearly two dozen other organizations are working with AARP in the Alliance for an Experienced Workforce, whose mission is to help employers understand, plan for and create workplaces that successfully engage workers over the age of 50 and utilize their skills.

As Venator writes, "Employers that fail to attract and keep the 50-and-over workforce lose a wealth of experience, skills and knowledge that these employees have gained by performing work at each rung of the career ladder. They risk losing core competencies, in-house expertise and mentors for future talent."

He cites an AARP survey of 2,000 workers age 50 to 70 that found that respect from employers, flexible work options, opportunities for training and new experiences, and competitive health care and retirement benefits were the issues identified as most important to the majority of older workers.

ASK A PREMIER 100 IT LEADER

Marc West

TITLE: Senior vice president and CIO

COMPANY: H&R Block Inc., Kansas City, Mo.

West is this month's guest Premier 100 IT Leader, answering readers' questions about innovation, skills in the 21st century, getting started in IT and more. If you have a question you'd like to pose to one of our Premier 100 IT Leaders, send it to askaleader@computerworld.com and watch for this column each month.

What are employer expectations for technical professionals in the 21st century? By that, I'm referring to skills as well as anything else that employers might be expecting, like degrees. Technology professionals need to offer expertise beyond core technical skills for continued development opportunities. Think of the challenge as aligning your "how" skills (how to build, operate, scale) with the "what" (the things the business cares about). Certifications offer some value, but only up to a point.

Converging the "how" and the "what" requires you to reach out to start the conversation with your business partners. The best way I know of is to reach out at the peer level and walk a mile in another person's shoes. It is amazing what you can learn and influence through simple conversation. Buy lunch for a peer on the business side and discuss what he does and how things can be better.

I got a bachelor's degree in computer information systems three years ago, and I haven't been able to find a job in IT yet. Right now, I'm working on my Oracle DBA certification. Please tell me what I need to do to get a database administrator's job. A degree is an important measure of skill and value but not the single factor that lands an IT job. If your goal is to be an Oracle DBA, you might want to consider taking another path, such as programming or operations, as an entry point and working your way over to the DBA career path. Landing a DBA job based on certification alone is challenging – you'll need some other IT or analyst skills base to attract attention to your résumé. Another DBA path that might work is to focus on other databases, such as MySQL or SQL Server, and consider smaller companies that are seeking skills beyond Oracle as an entry point. Having Oracle DBA certification is more valuable if you can demonstrate broader database skills, such as data modeling or performance analysis.

I have 12 years of experience in IT support and support management but am confused. With so many avenues in IT now, I'm not sure where to specialize. Any tips on what someone with my experience should focus on? The core question I'd ask is, "What do I want to do?" and work back from that point. At your experience level, specialization carries some risks, so be careful! Being seen as the go-to person for a specific area is great until that technology either changes or is commoditized. Assess your personal – not technical – strengths and build a development plan that leverages those as the primary focus.

Focus on the more valuable aspects of technology skills that will stand the test of time. Focusing on a specific aspect, like a technology stack, is like accomplishing a project – valuable but not enduring. Get the strategy right (your core skills), and the implementation (specialization and technical) will follow.

THE NUMBERS

59% of U.S. employees think that telecommuting at least part of the time is the ideal work situation. That includes 21% who said they would just as soon work at home all the time. But despite that strong show of support for telework, 83% said it's best to be in the office for meetings, because face-to-face encounters are the most effective. And for many workers, telecommuting is just a dream: Only 29% of all workers work from home more than once a week.

SOURCE: HUDSON SURVEY OF 1,911 U.S. WORKERS, JULY 2006

PAGE COMPILED BY JAMIE ECKLE.

EXEC TRAK

Gash Named CIO At St. Luke's Health

DEBORAH GASH has assumed the position of CIO at Saint Luke's Health System Inc. in Kansas City, Mo. She succeeds John Wade, who retired after 13 years at the company. Previously, Gash held the position of corporate director of application development at Saint Luke's, which she joined in 1992 as director of physician services for its medical group.

New Orleans CTO Greg Meffert Resigns

GREG MEFFERT, the first chief technology officer of the city of New Orleans and one of the leaders in Mayor Ray Nagin's post-Katrina rebuilding team, has resigned. Nagin has appointed Mark Kurt to fill the post.

Sams Steps Down as Ohio University CIO

Ohio University CIO **WILLIAM F. SAMS** has announced his resignation during a shakeup prompted by the theft of electronic files containing personal data on tens of thousands of students, alumni, donors and subcontractors. Sams, who has been CIO and associate provost for IT since 2004, will remain in the role until a replacement is named.

St. John to Resign As Fannie Mae CIO

Mortgage giant Fannie Mae has announced that **JULIE G. ST. JOHN** is resigning as CIO and will leave the Washington-based company by Dec. 31. St. John has worked at Fannie Mae for 16 years. Her separation package is conditioned on Fannie Mae's ability to later seek restitution or repayment pending an internal review under way related to the company's $10.6 billion accounting scandal.

Lesswing New CTO At Realtors Group

MARK LESSWING has been named chief technology officer and senior vice president of the National Association of Realtors in Chicago. He has been vice president and director of the NAR's Center for Realtor Technology for the past five years. Previously, Lesswing held management positions at Sybase Inc. and Oracle Corp.

PAUL GLEN

The Alamo Dilemma

SOMETIMES WORK IS A JOY. Sometimes we get to work with people we love. Sometimes projects are engaging, exciting and meaningful. Progress seems effortless. Sometimes we even wonder how we got so lucky as to get paid to do something this fun.

But then, sometimes work is a struggle, and we are confronted by intractable problems that can't be solved or even managed. Since most of us trained as engineers, we're steeped in the disciplines of problem solving, and we like to think that every problem has a solution. Given infinite time and money, we think we can solve anything. Unfortunately, it just ain't so. Some problems are battles that we are doomed to lose.

In my experience, there are two sources of constraints that make situations intractable. The easiest ones to accept emotionally are those that are just the result of circumstance. Reality has a way of dictating what's possible and what's not. Technical constraints, legacy technology, economic pressures, competitive positioning and regulatory requirements can make things difficult.

PAUL GLEN is the director of the Developing Technical Leaders Program (online: developingtechnicalleaders.com) and author of the award-winning book *Leading Geeks: How to Manage and Lead People Who Deliver Technology* (Jossey-Bass, 2002). Contact him at info@paulglen.com.

The hardest constraints to deal with are political. Sometimes the boss is the obstacle, or the boss's boss, or even the boss's boss's boss. There's something they want or some element of reality that they can't handle that compels them to place requirements on us that can't be met.

When you're faced with the no-win situation, you have only a few options:

1. Surrender.

2. Exit the organization.

3. Fight on, knowing that you're going to lose in the end anyway.

Surrendering seems the most common response. Offices are filled with the living dead who have given up — people who have long since stopped caring about anything. They drag themselves to work each day, passionless, sticking around only because of inertia and the paycheck.

As you can probably tell, I'm not a big fan of this option. When faced with a losing battle, passivity is rarely good for either the company or the employees. It's demoralizing. And for the individual, pretending to work is actually more exhausting and emotionally draining than working.

Another option, exiting the organization, can take many forms. The simplest is to quit. Just leave. If a person is faced with an impossible situation, there's nothing stopping him from moving on, other than the need for income. But for most people in this industry, finding another job, while inconvenient, isn't impossible.

But the exit need not be so drastic. In all but the smallest organizations, there are opportunities for internal transfer. If one boss becomes impossible to work with, there are others to look to.

If the impossible situation is one in which you face an ethical or legal quandary, exiting can be an especially good option. The principled quit can be quite liberating. While some might think of this as "cut and run," it's not necessarily so. In fact, many times, a key person's quitting becomes the wake-up call and ultimately the catalyst for changing the impossible situation into a more tenable one.

And finally, there is the option of fighting on, knowing that you'll probably lose in the end. This one happens most rarely, but it's the basis of much of our popular culture. Movie heroes frequently chase impossible dreams in the face of overwhelming odds and succeed more often than not. But I've observed that in real life, when someone thinks he's going to lose some political battle at work, he's generally right.

Some may say that fighting on is a stupid option that only hurts the person who chooses to engage in it. Is it ever worth the trouble? I'd say yes.

There are occasions when it's a good choice:

1. The cause is important. When the stakes are high, fighting tough odds can be worth the risk.

2. Staying sends a positive message to the rest of the staff. When leaving may demoralize an entire department or discourage their persistence, staying on may be the right option.

3. There's something important to learn. An opportunity for personal growth can be worth absorbing a fair amount of pain.

4. Time may transform the impossible into the possible. If waiting may remove the constraint, or the person imposing it, then it may be worth it.

When you're faced with a no-win situation, you do have options. It's important to consider them carefully rather than letting the current of life carry you down the river of misery.

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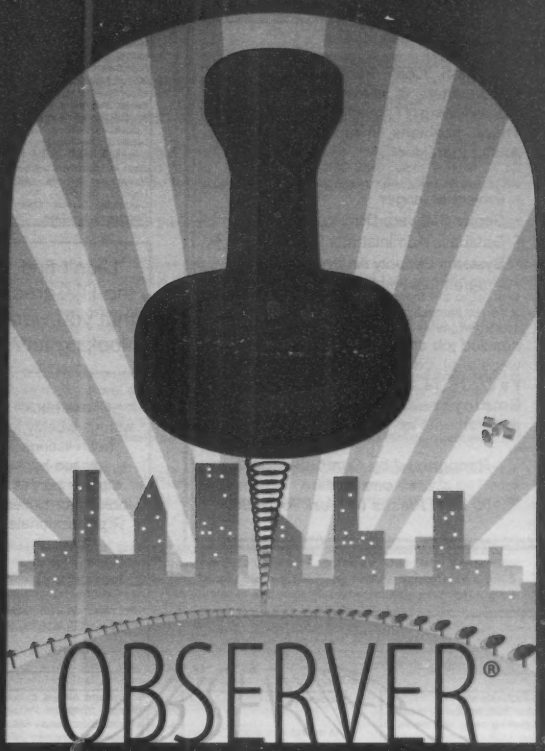

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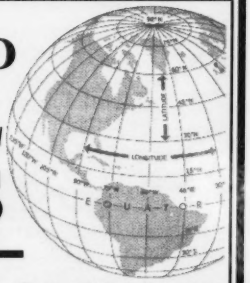

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Users Still Wary of Vista Security

Microsoft uses Black Hat forum to make case that new OS will be secure

BY ERIC LAI
LAS VEGAS

Microsoft Corp. stepped into the lion's den last week when it sent some top engineers to the Black Hat USA hacker conference here.

Their mission: to convince the toughest security audience in the world that Microsoft's upcoming Windows Vista will be more hacker- and malware-proof than any other operating system and that the company is committed to security.

The result: a reception that was mixed but bordering on positive from corporate security executives and security researchers. Many of them said they are impressed by Microsoft's stated commitment to security but are withholding judgment until Vista gets into corporate IT shops later this year.

"On the surface, it does seem like they've come around a corner and are committed to doing things right," said Rick Ebert, an information security officer at the California Institute of Technology in Pasadena.

Ebert said he was impressed with some of the changes to Vista that Microsoft showed off at Black Hat, such as requiring programmers to add extra annotations to Vista's code — enabling debugging software to more easily locate potential vulnerabilities — and encoding function pointers to make it more difficult for malware to cause damage.

On the other hand, Andre Gold, chief information security officer at Continental Airlines Inc. in Houston, was skeptical that Microsoft can live up to its security promises for Vista.

"They sound good and look great, but my impression is that they are not technologically competitive enough to usurp the third-party software we use now," he said.

Ebert said he is most impressed by Microsoft's public push to convince users that it is serious about securing its products. "Eighty percent of security is dealing with the psychology of people and processes," he said. "The technical part is almost easy by comparison."

> **Eighty percent of security is dealing with the psychology of people and processes. The technical part is almost easy by comparison.**
>
> **RICK EBERT,** INFORMATION SECURITY OFFICER, CALIFORNIA INSTITUTE OF TECHNOLOGY

Andrew Cushman, Microsoft's director for security engineering, said the spate of viruses, such as Code Red and Slammer, that targeted and wreaked havoc on Microsoft software about four years ago was a wake-up call for the company.

Vista is the first Microsoft product to follow the company's Security Development Lifecycle regimen from the start of its development, noted Cushman. He said SDL includes several steps, such as penetration testing by a team of in-house Microsoft hackers and checking all old and third-party code in the software.

"If you think of basic security flaws as low-hanging fruit, then we've taken away all of the watermelons lying on the ground," Cushman said.

"I've never seen any other company invest this much to prevent attacks against their software," said Dan Kaminsky, one of 20 security consultants hired by Microsoft to help tighten up Vista.

Kaminsky said he believes that Vista is now on par or better than operating systems such as Linux and Apple Computer Inc.'s Mac OS X.

Continued from page 1

Spyware

ness, pays my paycheck," said Pamela Fusco, an information security manager at a financial services company that she asked not be named.

Fusco says her team deals with spyware infections every day. The worst incident: spyware that began replicating itself so quickly that "in 20 seconds, it nearly took down our Microsoft Exchange system," she said.

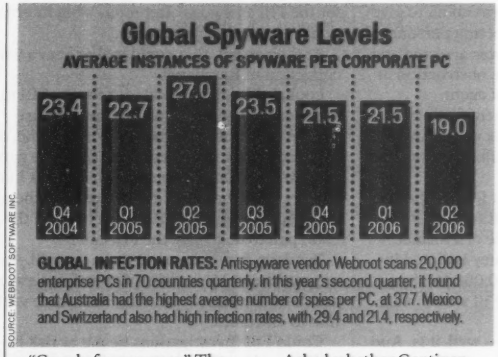
That's despite a comprehensive program Fusco set up for dealing with spyware. It includes antispyware technology from McAfee Inc. and SPI Dynamics Inc., continual PC audits, a global alert system, restrictions on the use of PCs, and education programs.

Another tactic businesses should adopt is closely monitoring domain name server logs, said Dan Kaminsky, an independent security consultant. It's important to teach your company's technical help desk that PCs that are running abnormally slow could be hosting spyware, said Drew Maness, senior security strategist at The Walt Disney Co.

"It's not technically feasible to stop spyware," Kaminsky said. "Think of the millions of PCs that have either been put away for good, sent away for service or replaced because of spyware infections. That is probably hundreds of millions or billions of dollars' worth of damage. Yet no one has gone to jail, no one has been sued."

Continued Growth

Recent statistics gathered by antispyware vendor Webroot Software Inc. point to spyware's continued growth. Between March and June of this year, Webroot discovered more than 100,000 new Web sites hosting spyware. That's in addition to the 427,000 that the company has discovered since it began searching for them in January 2004 using a specially tuned search engine that Chief Technology Officer Gerhard Eschelbeck calls a "Google for spyware." The average infected corporate PC has 19 instances of spyware on it, according to Webroot.



GLOBAL INFECTION RATES: Antispyware vendor Webroot scans 20,000 enterprise PCs in 70 countries quarterly. In this year's second quarter, it found that Australia had the highest average number of spies per PC, at 37.7. Mexico and Switzerland also had high infection rates, with 29.4 and 21.4, respectively.

Spyware makes up 80% of the malware afflicting computers at Houston-based Continental Airlines Inc., according to Chief Information Security Officer Andre Gold. His team routinely deals with PCs crippled by spyware by wiping the hard drives and completely reinstalling the operating system and software.

Asked whether Continental's security team runs into particularly nasty spyware, such as keyloggers that capture the keystrokes of users as they type in passwords and usernames, Gold said, "I can't imagine a company that doesn't see it."

While spyware is blooming, adware is wilting. The typical infected enterprise PC today is host to an average of 2.8 instances of adware, down from 3.9 in the fall of 2005, according to Webroot.

Not everyone agrees on what the difference is between relatively benign adware and more malignant spyware, which is one reason it has been so difficult to fight the latter, according to Kaminsky.

Laws must be put in place that clearly set out guidelines for would-be adware distributors, he said. For instance, laws could spell out that ads will be deemed spyware if users can't remove them within 10 seconds with a simple right-click of the mouse.

"As long as everything is gray, no one goes to jail," Kaminsky said.

Fusco agreed that today's laws today are inadequate for stopping spyware at the source. But Gold said another problem is the reluctance of infected companies to come forward and share information with government agencies.

"If I give you data, you could help me, or you could prosecute me" for lack of due diligence, Gold said. "It's an absolute catch-22."

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FRANK HAYES ■ FRANKLY SPEAKING

Courting Hackers

AT THE Black Hat USA security conference last week, the FBI offered a truce to hackers. Actually, it was more than that. Daniel Larkin, who heads up the FBI's Internet crime unit, came right out and asked for help from a group of people that the G-men have often been chasing over the past two decades. Larkin pointed out that hackers — er, security researchers — often dig up crucial cybersecurity information before law enforcement people do. And now that the FBI is working with software vendors, big online businesses and academic institutions, hackers are the next logical group for the bureau to join forces with.

What's wrong with this let's-all-ride-off-together picture? Well, for one thing, there's Steven Rambam.

Just 11 days before Larkin's pitch for FBI/hacker cooperation, four FBI agents walked up to Rambam at the Hackers on Planet Earth conference in New York. Rambam was about to give a two-hour presentation on collecting personal information online. Instead, he was arrested and charged with witness tampering, obstruction of justice and impersonating an FBI agent.

Arresting a hacker at a hacker conference just before he's about to give a big talk on hacking is *not* the optimal way to win the affections and cooperation of hackers.

Then again, the arrest warrant for Rambam *had* just been issued. And since Rambam is accused of interfering with the case of a former Brooklyn assistant district attorney indicted in 2003 for agreeing to launder $100,000 for drug dealers, it's easy to see why the FBI would want to act promptly.

If all that sounds very messy — well, it is. And that points to the real problem the FBI faces in its efforts to recruit the help of the Black Hat crowd.

Sure, some of them run professional IT security businesses these days. But it wasn't that long ago that many of them were pranksters or punks, poking around corporate firewalls and looking for ways in.

Their motives were rarely pure. A few were just curious. Most wanted to show off, have a little fun and raise a little hell. For some, that meant defacing Web sites or knocking out communications with denial-of-service attacks or hijacking servers to use as download sites for pirated software or movies.

And though they've now gone legit, many of these security researchers are still infuriatingly independent troublemakers who don't care much for anyone's rules.

At their best, that makes them perfect partners for the FBI as it goes after today's big international computer-crime gangs.

At their worst, that could make them a whole collection of Rambams.

Look, I think it's a good idea for the FBI to reach out to hackers. And not just because they're ahead of the feds much of the time, but also because of *why* they're ahead of the game. They've been on the outside. They think like attackers. They have the experience and the mindset to spot things the FBI doesn't — and the chutzpah to do things the FBI can't.

But deep down, many of them are still punks or pranksters. More than a few still believe rules and laws don't apply to them. And some will take that to extremes.

Could FBI investigations be put at risk because would-be junior G-men forget whose game they're playing and ignore the rules they have to play by? Maybe. Will bringing hackers into the FBI's efforts blur lines and make some things much messier? Probably. Will some of those hackers end up with arrest warrants one of these days? Perhaps.

Still, the risk is worth taking. Cybercrime is huge, well organized and growing. The threat is real. We're all at risk. The FBI needs all the help it can get.

But if the FBI's Larkin believes working with the Black Hat crowd is going to be anything like linking up with Microsoft and eBay and CERT, he's likely to be in for one very wild ride.

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

Death and the Pilot Fish

Five minutes after the help desk tells an executive to "reboot the system, and the problems will go away," the network suddenly goes down. Pilot fish rushes to the computer room and learns the truth: "She walked down three floors, persuaded the security guard to admit her to the computer room and ordered the tech to reboot the server," says fish. "When he asked why, she told him the orders came from the help desk." Fish jokingly asks the guard, "Why didn't you just shoot her?" Guard: "She's a vice president." Then, looking at the tech: "Him, I could shoot."

SHARK TANK

Bad Habit

Practically everyone in this company's management has a convenient but short-sighted habit, says a pilot fish who's not there anymore: "They kept all their work-related files in their e-mail in-box. And the shoddy mail server crashed every six months, wiping out everyone's 'safely stored' mails and attachments." But there's a benefit for those few who actually store their important files as files, fish says: "They soon became very highly regarded employees, and often received calls asking if they had a copy of some important document that was lost in the latest crash."

True, Sort Of

This pilot fish is practicing doing software installations from the file server when something goes wrong as he's killing off unneeded files. "The machine cranked for a few seconds instead of quickly deleting the empty folder," says fish. "Sure enough, in two seconds I had deleted a large chunk of files off our main server. Quickly, I logged into a terminal session, opened the recovery bin and restored everything there, not wanting to miss any lost files. The help desk phone rang a few times from users wanting to know why files they had deleted were back. Of course, I blamed that on a glitch in the server."

Death Redux

Pilot fish is the only IT guy at this small organization, and he agrees with an outside IT auditor that the organization needs a business continuity plan in case of a disaster. The problem? "The auditor's argument was partially based on my projected demise," grumbles fish. "I asked the twentysomething auditor if we could avoid using my mortality as a bullet point in an audit report. I explained that, given the working conditions and the last wage increase, it was more likely that I would just stop showing up for work at some point. Unfortunately, that's not one of the options on the report, but he says he'll talk to his supervisor."

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7:45am to 8:15am	**Registration and Networking Breakfast**
8:15am to 8:30am	**Introduction and Overview** Don Tennant, Vice President and Editor in Chief, Computerworld
8:30am to 9:15am	**Industry Overview**
9:15am to 9:45am	**End User Case Study**
9:45am to 10:00am	**Refreshment and Networking Break**
10:00am to 10:30am	**Transforming the Business Through the Office of the CIO** Cecilia Claudio, Chief Information Officer, Mercury
10:30am to 11:00am	**Driving Operational Excellence During Rapid Growth** Robert Watson, Vice President of IT Operations, Cingular Wireless
11:00am to Noon	**Panel Discussion** Moderator: Don Tennant, Vice President and Editor in Chief, Computerworld Panelists: Cecilia Claudio, Chief Information Officer, Mercury; Robert Watson, Vice President of IT Operations, Cingular Wireless

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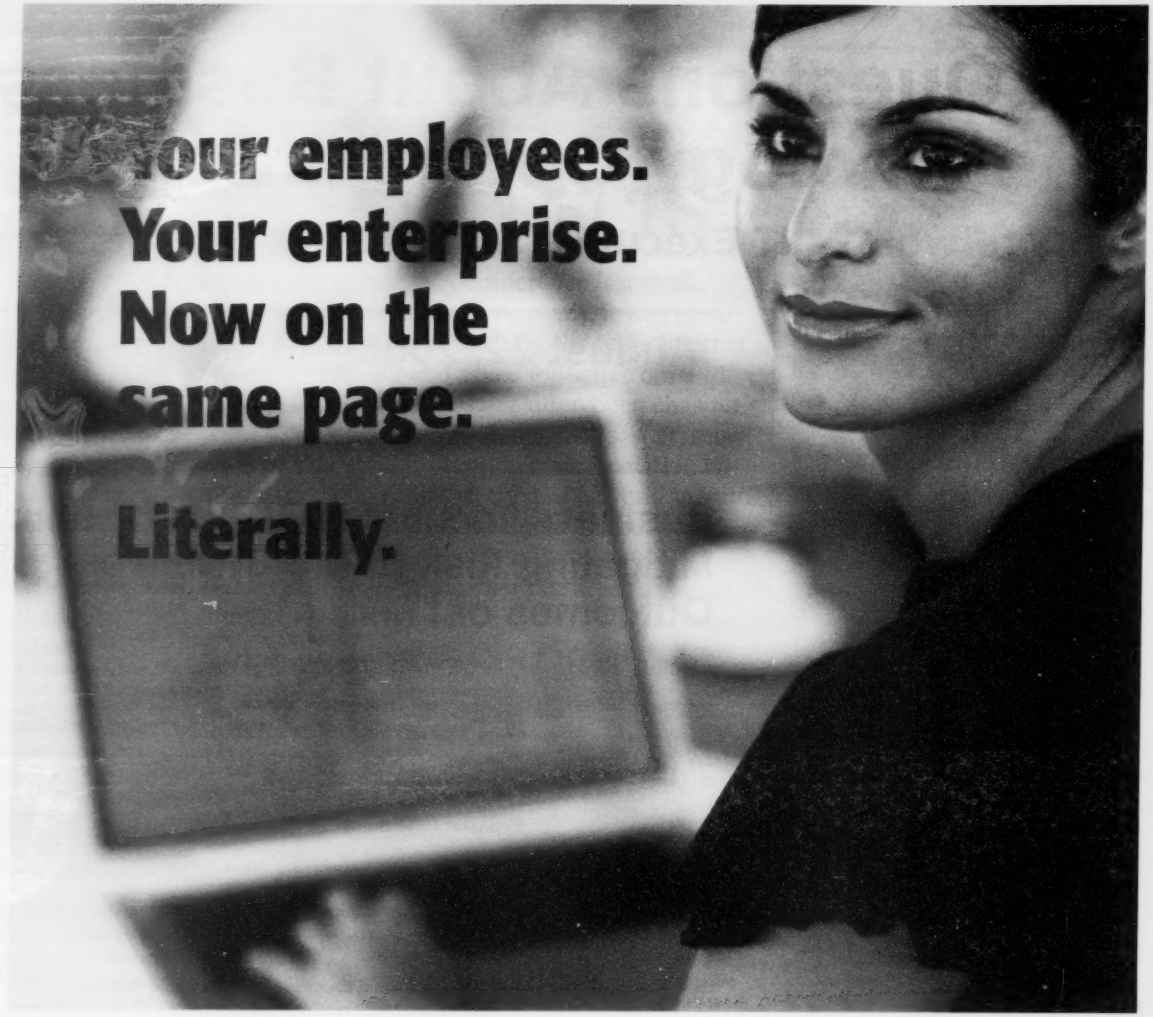

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